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paratransit handbook : implementing
the complementary paratransit
service requirements of the
Americans with Disabilities Act of



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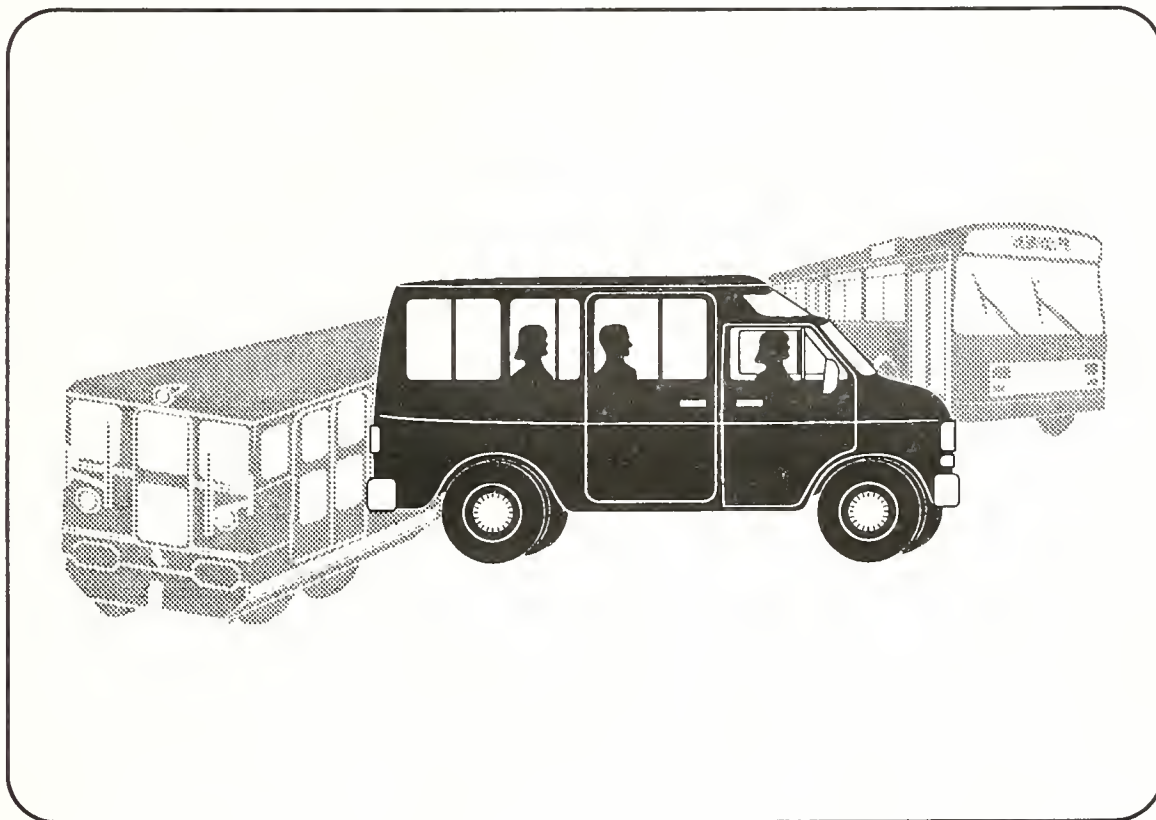


U. S. Department
of Transportation

**Urban Mass
Transportation
Administration**

ADA PARATRANSIT HANDBOOK:

Implementing the Complementary
Paratransit Service Requirements of the
Americans with Disabilities Act of 1990



September 1991

**Prepared for the UMTA Task Force on the
Americans with Disabilities Act**

Funded through the Office of Technical Assistance and Safety

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16. Abstract This handbook provides guidance and practical information for implementing the complementary paratransit service requirements of the Americans with Disabilities Act of 1990 (ADA). A primary purpose of this handbook is to assist transit operators and planners with the preparation of required ADA paratransit plans. The first five chapters summarize the law and complementary paratransit service requirements. Eligibility determination, service criteria, and operating standards and requirements are analyzed in detail. The last four chapters discuss paratransit service models; ways to enhance fixed route service in order to reduce the need for paratransit; the preparation of paratransit plans, including a step-by-step planning methodology; and, key implementation issues such as scheduling, training, equipment specifications, and recordkeeping. Applicable regulatory text is included in an appendix. Other appendices include a sample eligibility form; suggestions for making communications and information accessible; a sample advisory committee Memorandum of Understanding; information about state-of-the-art computer-assisted scheduling; and, numerous references and sources of technical assistance.					
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METRIC / ENGLISH CONVERSION FACTORS

ENGLISH TO METRIC

LENGTH (APPROXIMATE)

1 inch (in) = 2.5 centimeters (cm)
 1 foot (ft) = 30 centimeters (cm)
 1 yard (yd) = 0.9 meter (m)
 1 mile (mi) = 1.6 kilometers (km)

AREA (APPROXIMATE)

1 square inch (sq in, in²) = 6.5 square centimeters (cm²)
 1 square foot (sq ft, ft²) = 0.09 square meter (m²)
 1 square yard (sq yd, yd²) = 0.8 square meter (m²)
 1 square mile (sq mi, mi²) = 2.6 square kilometers (km²)
 1 acre = 0.4 hectares (he) = 4,000 square meters (m²)

MASS - WEIGHT (APPROXIMATE)

1 ounce (oz) = 28 grams (gr)
 1 pound (lb) = .45 kilogram (kg)
 1 short ton = 2,000 pounds (lb) = 0.9 tonne (t)

VOLUME (APPROXIMATE)

1 teaspoon (tsp) = 5 milliliters (ml)
 1 tablespoon (tbsp) = 15 milliliters (ml)
 1 fluid ounce (fl oz) = 30 milliliters (ml)
 1 cup (c) = 0.24 liter (l)
 1 pint (pt) = 0.47 liter (l)
 1 quart (qt) = 0.96 liter (l)
 1 gallon (gal) = 3.8 liters (l)
 1 cubic foot (cu ft, ft³) = 0.03 cubic meter (m³)
 1 cubic yard (cu yd, yd³) = 0.76 cubic meter (m³)

TEMPERATURE (EXACT)

$$[(x - 32)(5/9)]^{\circ}\text{F} = y^{\circ}\text{C}$$

METRIC TO ENGLISH

LENGTH (APPROXIMATE)

1 millimeter (mm) = 0.04 inch (in)
 1 centimeter (cm) = 0.4 inch (in)
 1 meter (m) = 3.3 feet (ft)
 1 meter (m) = 1.1 yards (yd)
 1 kilometer (km) = 0.6 mile (mi)

AREA (APPROXIMATE)

1 square centimeter (cm²) = 0.16 square inch (sq in, in²)
 1 square meter (m²) = 1.2 square yards (sq yd, yd²)
 1 square kilometer (km²) = 0.4 square mile (sq mi, mi²)
 1 hectare (he) = 10,000 square meters (m²) = 2.5 acres

MASS - WEIGHT (APPROXIMATE)

1 gram (gr) = 0.036 ounce (oz)
 1 kilogram (kg) = 2.2 pounds (lb)
 1 tonne (t) = 1,000 kilograms (kg) = 1.1 short tons

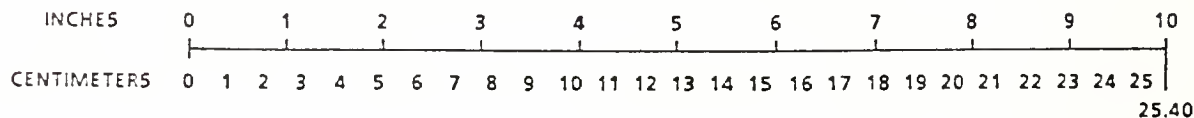
VOLUME (APPROXIMATE)

1 milliliter (ml) = 0.03 fluid ounce (fl oz)
 1 liter (l) = 2.1 pints (pt)
 1 liter (l) = 1.06 quarts (qt)
 1 liter (l) = 0.26 gallon (gal)
 1 cubic meter (m³) = 36 cubic feet (cu ft, ft³)
 1 cubic meter (m³) = 1.3 cubic yards (cu yd, yd³)

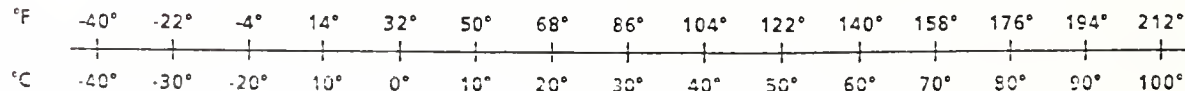
TEMPERATURE (EXACT)

$$[(9/5)y + 32]^{\circ}\text{C} = x^{\circ}\text{F}$$

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Introduction

On September 6, 1991, the U.S. Department of Transportation (USDOT) published final regulations implementing certain provisions of the Americans with Disabilities Act of 1990 (ADA). Included in these regulations was a requirement that public entities operating fixed route transportation service for the general public also provide complementary paratransit service to persons unable to use the fixed route system. The regulations specify: when this service is required; eligibility criteria for these paratransit services; the level of service which must be provided; and, standards for certain aspects of operation. The regulations also require that a plan for implementing complementary paratransit service be submitted by January 26, 1992 and service be in full compliance as soon as possible, but no later than five (5) years from that date.

This handbook is intended to provide public transportation agencies, decision-makers, and persons with disabilities with guidance on the regulations. It also is intended to assist public entities in preparing their paratransit plans and in implementing the required service. The first half of the handbook, Chapter 1 through Chapter 5, provides an overview of the ADA and the sections of the DOT regulation which pertain to complementary paratransit services. The complex issue of eligibility is discussed in Chapter 4. Service criteria and operating standards are explained in Chapter 5.

The second half of this handbook addresses the development and implementation of a paratransit plan. Options for providing paratransit service and for enhancing fixed route service are discussed in Chapter 6. A comprehensive planning process, including step-by-step instructions, is provided in Chapter 7. Suggestions for involving persons with disabilities in planning, service design, and evaluation are included in Chapter 8. Information about important operational issues, such as scheduling, training, and equipment selection is provided in Chapter 9.

This handbook is designed to be of assistance to public entities with limited paratransit experience as well as those who now operate extensive paratransit services. The text provides the reader with a basic understanding of operational issues. Numerous references and appendices are included to give more experienced readers state-of-the-art information. Additional sources of information are identified by the following symbol: 📌

|| Legal citations are identified with a margin bar.

As reference tools, the various chapters of this handbook also have been written to be used independently. Decision-makers who need a general understanding of the law and regulations and how it relates to broader transportation policy can read Chapters 1, 2, and 3. Planners responsible for developing paratransit plans and for generating demand projections and other supporting information will find Chapters 6, 7, and 8 particularly helpful. Program managers and those involved in operations can get more detailed discussions of eligibility, service standards, and operating procedures in Chapters 4, 5, and 9. Persons with disabilities and agencies that represent them will find the discussion of eligibility in Chapter 4 to be of particular interest. Agencies that provide service to persons with disabilities and who are interested in coordination with public transit providers also are referred to Chapter 6.

To facilitate independent use of the different chapters, reference is made to other sections of the handbook when additional information is needed. In some sections, though, there is

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a certain amount of repetition of key information, such as eligibility requirements, when a simple reference to another section is not sufficient.

While this handbook provides a framework and methodology for developing and implementing a successful paratransit service, it is not intended to provide a precise policy or service design. Eligibility, coordination, and other important issues are affected by local factors. A planning process with strong consumer and public participation is of paramount importance. An ongoing planning and evaluation process, which will allow correction of initial plans and estimates and adjustments to changing conditions, also is necessary.

Acknowledgements

This handbook would not have been completed so soon after the publication of the regulations without the efforts of a number of individuals. The authors would like to gratefully acknowledge all those who contributed to this report and who provided support in its preparation.

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A draft of the handbook also was distributed to the Federal Advisory Committee on the ADA. Their comments and advice as transit providers, consumers, advocates, and service providers representing persons with disabilities was invaluable.

Some of the text and much of the appendix material was contributed by others. Paratransit service information was developed using reports prepared by the Center for Systems and Program Development of Washington, D.C., Charles River Associates of Boston, Massachusetts, and Crain and Associates of Menlo Park, California. Additional service information was graciously provided by Kathy Cox of the Massachusetts Bay Transportation Authority, Clementine Newkirk of the Washington Metropolitan Area Transit Authority, and Nancy Senn of the Milwaukee County Department of Public Works. Jim Fleming of the National Easter Seal Society Project ACTION office brought the service route information to our attention. Catie Simpson of Independent Training Consultants, Pleasanton, California, provided the summary of travel training alternatives.

The thorough guidance on making information and communications accessible was developed by the National Center for Access Unlimited, a nonprofit collaboration of the United Cerebral Palsy Associations, Inc. and Adaptive Environments Center(AEC), Inc. of Boston. Elaine Ostroff and Nancy Goldman of AEC provided this information. Braille printer and software information was provided by Joe Lazzaro of the Massachusetts Commission for the Blind.

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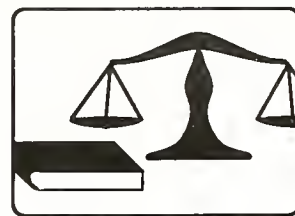
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The Americans with Disabilities Act of 1990 and Related Regulations



Section 1.

An Overview of the Law

The Americans with Disabilities Act of 1990 (the ADA) is the culmination of almost 20 years of debate on the issue of disability rights. It provides a comprehensive framework and approach for ending discrimination against persons with disabilities. The stated national goals of the ADA are identified in its preamble and include assuring that persons with disabilities have equality of opportunity, a chance to fully participate in society, are able to live independently, and can be economically self-sufficient.

The ADA has five sections, or **Titles**. The first four set out specific standards for nondiscrimination and equal opportunity in four key areas. Title V includes several administrative and miscellaneous provisions. Titles I through IV are summarized below.

Title I. Title I addresses employment. Discrimination against qualified individuals with disabilities is prohibited in all aspects of employment including hiring, advancement, discharge, employee compensation, and job training. Reasonable accommodation for qualified applicants or employees also is required unless it imposes an undue hardship on the operation of the business. Reasonable accommodations include making the job site accessible; providing employees with interpreters, readers, or communications equipment such as a telecommunications display device (TDD); partial restructuring of non-essential elements of the job;

modifying work schedules; or other changes that allow the person to fulfill the essential functions of the job. Employers with 25 or more employees must comply with this section of the law by July 26, 1992. Employers with 15 to 24 employees have an extra two years, or until July 26, 1994, to meet these requirements.

Title II. Title II addresses public services. Discrimination against persons with disabilities is prohibited in all services, programs, or activities provided by public entities.

It is important to note that this section also covers services provided by private entities under contract to public entities. A contract provider "stands in the shoes" of the granting agency. Public entities still are responsible for making sure that these services meet the requirements of the ADA even if they do not provide them directly.

A substantial part of Title II addresses transportation provided by public entities. In general, the law prohibits public entities from denying individuals with disabilities the opportunity to use public transportation services, if the individuals are capable of using the system. It also prohibits public entities from providing services which discriminate against persons with disabilities. Specific actions which must be taken by public transit agencies, commuter rail authorities, and AMTRAK to avoid discrimination are delineated. For example, the law requires that:

- all newly purchased or leased vehicles used in fixed route service must be accessible.

- public entities which provide fixed route public transportation service also must offer comparable paratransit service to individuals with disabilities who are unable to use the fixed route system.
- new or used vehicles purchased or leased for use in general public demand responsive service must be accessible unless it can be shown that equivalent service is provided to persons with disabilities.
- vehicles which are remanufactured (defined to include structural changes) to extend their useful life beyond a given number of years (5 years for buses, 10 years for commuter and intercity rail cars) must include accessibility features.
- new facilities must be accessible.
- alterations to transit facilities must include features to make them accessible. Alterations covered by the law include changes that affect or could affect the usability of the facility. Not covered are normal maintenance, painting, or changes to the electrical, mechanical, or plumbing systems.
- key stations in rail systems must be made accessible by July 26, 1993.
- One car per train in rapid rail and light rail systems must be accessible by July 26, 1995.

A chart of these requirements is provided as Table 1.1.

Title III. A significant difference between the ADA and past disability laws is that specific requirements for non-discrimination are extended to the **private sector**. Title III of the ADA addresses public accommodations and services operated by private entities. This section of the law provides for the full and equal enjoyment of the goods, services,

facilities, privileges, and advantages of any privately owned "place of public accommodation" by persons with disabilities. It is this section of the law that provides for access to hotels, restaurants, theaters, stores, professional offices, schools, museums, **terminals, depots, or other stations used for public transportation**, and a number of other privately owned places used by the general public. Barriers that can be eliminated without much difficulty or expense must be removed by January 26, 1992. Alterations to existing facilities must provide for access. New facilities constructed for first occupancy after January 26, 1993 also must include accessibility features.

In addition to requiring access to facilities, this section prohibits discrimination by private entities in the provision of services; the setting of policies; or other advantages, privileges and accommodations provided to the public.

This Title also includes requirements for the provision of public transportation by private entities. The law distinguishes between companies providing transportation as a **primary** business and companies, such as hotels or convention centers, which offer transportation as a **secondary** service. Companies offering transportation as a secondary service must purchase or lease vehicles which are accessible if these vehicles are to be used in fixed route service and seat more than 16 passengers (including the driver). If a fixed route service is offered using smaller vehicles, these vehicles also must be accessible unless it can be shown that equivalent service is provided to persons with disabilities.

Companies providing transportation as a primary service must purchase or lease new vehicles (except automobiles or over-the-road coaches) that are accessible if the vehicles are to be used in fixed route service and seat eight or more passengers (including the driver). If smaller vehicles

Table 1.1
A Summary of ADA Transportation Requirements for Public Entities

Type of Service	Requirements
All Types of Service	General nondiscrimination is required so that "...no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the (transportation) services..." provided by a public entity. (Section 202 of Title II).
Non-Rail Fixed Route Service	Vehicles purchased or leased after August 25, 1990, must be accessible. Vehicles remanufactured to extend their useful life by five (5) years or more must be made accessible to the maximum extent feasible. Before buying or leasing used vehicles which are not accessible, a "good faith effort" must be made to locate accessible vehicles. Comparable paratransit service must be provided to persons unable to use the fixed route system.
Demand Responsive Service for the General Public	Newly purchased or leased vehicles, ordered after August 25, 1990, must be accessible unless it can be shown that equivalent service is provided to persons with disabilities.
Rapid Rail and Light Rail	Key stations must be made accessible by July 26, 1993, unless a waiver is granted. Waivers can allow up to 30 years for the provision of access provided that 2/3 of key stations are accessible within 20 years. All new vehicles ordered after August 25, 1990 must be accessible. Before buying or leasing used vehicles which are not accessible, a "good faith effort" must be made to locate vehicles which are accessible. Vehicles remanufactured to extend their useful life by five (5) years or more must be accessible to the maximum extent feasible. One car per train must be accessible by July 26, 1995. Comparable paratransit service must be provided to persons unable to use the rail system.
Commuter Rail and AMTRAK	All new cars purchased on or after August 26, 1990, must be accessible. Cars remanufactured to extend their useful life by ten (10) years or more must be made accessible. A good faith effort must be made to locate used cars that are accessible. All new stations must be accessible. Key stations must be made accessible by July 26, 1993, unless a waiver is granted. Waivers can allow up to 20 years to make key stations accessible. Existing AMTRAK stations must be made accessible by July 26, 2010.
Facilities	Programs and activities provided in existing facilities must, when viewed in their entirety, be readily accessible to and usable by individuals with disabilities. All new facilities must be accessible. Alterations to existing facilities must be accessible. When alterations to primary function areas are made, an accessible path of travel to the altered area (and the bathrooms, telephones, and drinking fountains serving that area) must be provided to the extent that the added accessibility costs are not disproportionate to the overall costs of the alterations.

are used, the company must purchase or lease new vehicles that are accessible or provide service that is equivalent to that provided to the general public.

Both types of companies must purchase accessible vehicles used in demand responsive service unless the system, when viewed in its entirety, provides equivalent service to persons with disabilities.

Private airlines are exempted from the ADA (but must comply with provisions of the Air Carrier Access Act) and special provisions are made for intercity bus companies operating over-the-road coaches. The law calls for a study to be undertaken to examine the potential demand for accessible intercity bus service and the alternatives for providing this service.

Title IV. This section of the law addresses telecommunications access. Under this section, the nation's telephone companies are required to begin offering telecommunications relay services for individuals with hearing impairments or speech impairments by July 26, 1993. Relay services enable a person with a speech or hearing impairment to call an operator using a telecommunications display device (TDD). The operator, who also has a TDD, then relays the conversation by voice to a third party. Similarly, a person using the voice telephone system can converse with an individual with a speech or hearing disability through the same relay service.

Section 2.

Implementing Regulations

Many sections of the ADA, including the transportation provisions, are open to interpretation. This is not unusual for major legislation. The purpose of the law is to set goals, define general types of discrimination, and create a framework for addressing this discrimination. As with other civil rights legislation, specific definitions, interpretations, and

requirements are spelled out in regulations issued by the implementing agencies. Several regulations have already been issued to implement the ADA.

Regulations issued on July 26, 1991 by the Equal Employment Opportunity Commission (EEOC) implement the employment provisions of the ADA contained in Title I. The Department of Justice (DOJ) issued regulations implementing Title II and Title III and covering all public services and public accommodation issues *other than transportation* on July 26, 1991. The Federal Communications Commission (FCC) is responsible for implementing the telecommunications section (Title IV) and published its regulations in the *Federal Register* on August 1, 1991.

Regulations covering transportation services provided by both public entities (under Title II) and private entities (under Title III) were issued by the Department of Transportation (USDOT). Two sets of regulations have been issued to date. The first, contained in the October 4, 1990, *Federal Register*, implemented requirements for purchasing or leasing vehicles that are accessible. It also required public entities providing paratransit service to maintain present levels of service until their plans for complementary paratransit service are submitted. The second set of regulations was published in the September 6, 1991, *Federal Register*. This rule supersedes the October 4, 1990, rule and implements other provisions of the ADA.

☛ This second rule is contained in Appendix A of this handbook.

The USDOT regulations include design standards for both facilities and vehicles issued by the Architectural and Transportation Barriers Compliance Board (Access Board). Design standards for facilities are provided in Appendix A of the DOT rule. Vehicle design standards are included as Part 38 of the regulation

and are also included in Appendix A of this Handbook.

Appendix K of this handbook contains the names and phone numbers of persons in each federal agency who can be contacted for further information about the implementing regulations.

Section 3.

Relationship to Section 504

Passage of the ADA and the issuance of implementing regulations changed many aspects of public dis-

ability policy previously established under Section 504 of the Rehabilitation Act of 1973 (Section 504). The ADA established clear national goals and a **specific and detailed**

course of action required to meet those goals. Compared to Section 504, the ADA requires a much greater degree of "affirmative action" in employment, programs, services, and policies. As a civil rights law, the ADA also elevates the importance of access and nondiscrimination beyond eligibility for federal funding.

Several changes in transportation policy have been made. The ADA no longer allows public entities providing general public transportation the option either of making their fixed route systems accessible or providing separate paratransit service for persons with disabilities. Access to fixed route systems is required. Under the ADA, paratransit is not a substitute for fixed route service but a supplement for those who are unable to use the fixed route system.

The ADA is more extensive in its coverage of the various modes of transportation. Detailed requirements for commuter rail, rapid rail, and light rail vehicles and service are included. Another significant difference is that the ADA establishes, for

the first time, accessibility standards for vehicles and amends the standards for facilities previously used by Section 504.

While the ADA changed the approach to access and nondiscrimination, it did not replace Section 504. The general requirement of Section 504 - that entities not discriminate against persons with disabilities as a condition of eligibility for federal funding - still exists. Rather, the two laws are now interrelated. Compliance with the provisions of the ADA is now a condition of compliance with Section 504.

Access to fixed route systems is required. Under the ADA, paratransit is not a substitute for fixed route service but a supplement for those who are unable to use the fixed route system.

Many provisions of the ADA are not yet in force. Requirements for facility access and complementary paratransit service, for example, will not become effective until

January 26, 1992. During this transition period, the provisions of Section 504 still apply. Compliance with the facility access provisions of Section 504 is also still required.

The USDOT regulations also state that recipients of federal transit funding are expected to make decisions during this transition period that are consistent with the future requirements of the ADA. If a decision about the design of existing paratransit service will be made before January 26, 1992, it should be in the direction that will make compliance with the ADA's complementary paratransit service provisions easier to achieve. Similarly, modifications and alterations to facilities should include, whenever possible, the latest ADA standards, even if they are not yet required.

Finally, entities previously subject to the employment provisions of Section 504 must now comply with Title I of the ADA and with the regulations issued by EEOC. Compliance by these recipients of federal funding is required regardless of the number of persons they employ.

Section 4.

Enforcement

The ADA specifies the administrative processes that regulating agencies are to follow in enforcing provisions of the law. The powers, remedies, and procedures set forth in the Civil Rights Act of 1964 apply to the employment provisions of Title I and to the public accommodation and service provisions of Title III. Injunctive relief is also permitted under Title III.

Enforcement of Title I is the responsibility of EEOC. Title III enforcement is to be provided by DOJ with the assistance of USDOT.

The remedies, procedures, and rights which exist under Section 504 (set forth in Section 505 of the Rehabilitation Act of 1973) apply to the requirements of Title II. Enforcement responsibilities under this Title are shared by

USDOT and DOJ.

Public entities receiving federal financial assistance from USDOT are subject to the enforcement procedures of that agency. Other

public entities are subject to the enforcement provisions in the DOJ regulations. DOJ and USDOT have coordinated their regulations so that all transportation-related complaints will be handled by USDOT.

Complaints concerning transportation under both Title II and Title III must first be filed with the USDOT Office of Civil Rights. USDOT will then investigate and, if violations exist, will attempt to resolve the problem. If violations are not corrected, USDOT will initiate proceedings to cut off federal funds. In addition, all entities subject to these regulations may be subject to further administrative or judicial action by DOJ.

The USDOT regulations state that enforcement of Title II will focus on ensuring that entities meet their

obligations, rather than on the imposition of sanctions. They also state that priority in enforcement will be given to situations where there is a "pattern or practice" of discrimination, rather than to isolated operational issues.

In addition to administrative enforcement, the ADA gives private individuals the right to initiate legal action against entities that violate the law. These private actions can be brought concurrent with any administrative action. Section 505 of the ADA also provides for the awarding of attorney's fees in any private action or administrative proceeding.

Where state or local laws conflict with provisions of the ADA, federal law applies. The same would apply to local agreements, including labor-management agreements. A local law or agreement that did not allow bus drivers to leave their

seats, for example, would be preempted by §37.165 of the USDOT regulations. The ADA does not, however, preempt state and local laws or agreements

which have equal or additional requirements.

Section 5.

Important Definitions

Appendix B provides a comprehensive listing of terms and definitions used in the USDOT regulations and the sections of the ADA which relate to transportation.

Many of these terms and definitions also are explained as they are used in the various chapters of this handbook. A few key definitions and general concepts which affect many different aspects of the regulations are discussed below.

What is a "disability"? The term "disability" is defined to include any physical or mental impairment that substantially limits one or more major life activities, a record of such an impairment,

...priority in enforcement will be given to situations where there is a "pattern or practice" of discrimination, rather than to isolated operational issues.

or being regarded as having such an impairment. Major life activities include caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working. The definition used in the ADA is similar to the one used in Section 503 and Section 504 of the Rehabilitation Act of 1973 and in the many regulations implementing that law with two additions: persons with cognitive disabilities and those with contagious or noncontagious diseases (including tuberculosis and HIV disease) are specifically included in the definition.

☛ A detailed discussion of specific disabilities and how they relate to the provision of complementary paratransit service is provided in Chapter 4 of this handbook.

What is a "public entity"? A public entity is defined as any State or local government, any department, agency, special purpose district, or any other instrumentality of a State or States or local government, the National Railroad Passenger Corporation (AMTRAK), or any commuter authority under the Rail Passenger Service Act.

What is the difference between "designated public transportation" and "specified public transportation"?

As noted earlier, the ADA contains requirements for public entities that are different than those for private entities. It also addresses modes of transportation differently. The terms "designated public transportation" and "specified public transportation" were created to distinguish between different modes and entities.

"Designated public transportation" refers to transportation provided by a **public entity** (other than public school transportation) by bus, rail, or other conveyance (other than transportation by aircraft or intercity or commuter rail transportation) that provides the public

with general or special service, including charter service, on a regular and continuing basis. Commuter and intercity rail services are excluded from this type of public transportation because they are treated separately by the ADA. Public school transportation is excluded because it is covered under the Rehabilitation Act of 1973.

"Specified public transportation" refers to transportation by bus, rail, or any other conveyance (other than aircraft) provided by a **private entity** to the general public, with general or special service (including charter service) on a regular and continuing basis.

Air service is excluded from both of these definitions of public transportation because, as mentioned earlier, it is covered under the Air Carrier Access Act of 1986 (P.L. 99-435).

These definitions are ADA specific and do not necessarily apply to other laws or to the federal mass transit program. Neither definition has the same meaning as the term "eligible mass transportation," used in connection with programs funded under the Urban Mass Transportation Act of 1964.

Considering these definitions, it is clear that the ADA was intended to be comprehensive in its coverage of all types of transportation not already addressed by other laws.

How are "fixed route service", "demand responsive service" and "paratransit" defined? The ADA broadly defines all types of transportation using these first two terms. **Fixed route** is defined as service provided along a prescribed route according to a fixed schedule. **Demand responsive** is any service which is not fixed route. The term **paratransit** is commonly used to describe certain types of demand responsive

Considering these definitions, it is clear that the ADA was intended to be comprehensive in its coverage of all types of transportation not already addressed by other laws.

services. The USDOT's implementing regulations and this handbook use "paratransit" to describe the comparable transportation service that must be provided for individuals with disabilities who are unable to use fixed route systems.

Many types of transportation, such as route deviation systems and certain types of shuttle bus services, are not easy to classify using these broad definitions.

☛ Chapter 2 discusses several of these and clarifies whether or not complementary paratransit service is required in each case.

What makes a service "accessible"?

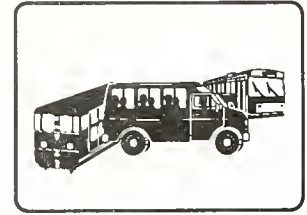
Access is often thought of as physical access to vehicles and buildings (i.e. lifts

and ramps). Ramps, lifts and other accessibility hardware need to be properly designed, however, to meet the needs of persons with disabilities and to accommodate different mobility aids. Access also involves proper training of personnel and proper maintenance of equipment. The operating policies and procedures adopted by transit agencies are also an important part of an "accessible" service. Finally, access means making public information and communications systems accessible to persons with vision and hearing impairments.

☛ Appendix E provides suggestions for developing accessible information and communications.

2

Complementary Paratransit Service Requirements



Section 1.

When Is Complementary Paratransit Service Required?

The underlying tenets of the ADA are equal opportunity, full participation, and independence. The law intends for persons with disabilities to have equal access to facilities and to be able to fully and equally participate in programs and services. Access to mainline, fixed route service is, therefore, to be provided.

While access to fixed route systems is the primary focus, the law acknowledges that some persons with disabilities are not able to use fixed route services even if these services are accessible. The law also acknowledges that until fixed route systems are made completely accessible, alternative means of transportation need to be provided to persons who are otherwise able to use accessible fixed route services. **Complementary paratransit service** is required in Section 223 of the ADA to serve those persons whose needs cannot be met by fixed route systems.

Complementary paratransit is not required in all cases where fixed route service is provided. Section 223 of the ADA applies only to **designated public transportation** as defined in Chapter 1. The USDOT regulations implementing this section of the law requires that, except for commuter bus, commuter rail, and intercity rail systems:

“...each public entity operating a fixed route system, shall provide paratransit or other special service to individuals with disabilities that is comparable to the level of service provided to individuals without disabilities who use the fixed route system.” (§37.121)

Commuter rail and intercity rail services are not subject to complementary paratransit service requirements because, like public school transportation and transportation by aircraft, they are not included in the ADA’s definition of “designated public transportation”.

Commuter bus service also is exempted. The regulations define commuter bus service as being predominantly in one direction during peak periods, having limited stops, using multi-ride tickets, and having routes of extended length, usually between a central business district (or other employment center) and outlying suburbs. Systems with limited route structures, limited stops, and a coordinated relationship to another mode of transportation also are defined as commuter bus services. A number of systems fall within this definition and are mentioned specifically in the regulations. They include:

- shuttle bus services operated by public airports, which connect terminals, parking lots, or a limited number of other local destinations (§37.33);
- Fixed route systems operated by public universities (§37.25);
- bus systems used to supplement intercity rail service which connect rail stations to a limited number of other points (§37.35); and,
- dedicated bus service to commuter rail systems which are available only to users of the rail system and which have through ticketing arrangements (§37.35).

A second important distinction is that complementary paratransit service is required only if the fixed route service is operated by a **public entity** (see definition in Chapter 1). The word “operate” is defined to include both direct operation and contracted operation. A contract is broadly defined to include any formal or informal arrangement.

Not all relationships are covered by this requirement. Complementary paratransit service does not have to be provided by public entities which only license or regulate an operator of fixed route service. Similarly, complementary paratransit service is not required if

a public entity provides capital assistance to a fixed route operator but is otherwise not involved in the design or funding of the operation. Nor

does the regulation require the private entity receiving the subsidy to provide paratransit service, since the complementary paratransit service requirements only apply to public entities.

States which pass-through Section 18 or Section 16(b)(2) funding to private, non-profit agencies are not responsible, solely by reason of awarding these funds, to also provide complementary paratransit service. It should be noted that, while complementary paratransit service is not required, for-profit and non-profit private entities must comply with all other applicable sections of the law.

As a general rule, service would be considered “under contract” to a public agency if the service would otherwise be operated by the public entity.

Third, complementary paratransit is required only if fixed route service is open to the general public. If fixed route service is available only to a defined group, such as employees, complementary paratransit service is not required. This also would apply to regularly scheduled transportation provided under contract to

human service agencies (e.g. a weekly “shopping shuttle” for a senior center). If this service is only provided to clients of the human service agency, complementary paratransit service is not required. If this service also is open to the public, however, complementary paratransit service must be provided.

A fourth factor in determining if complementary paratransit service must be provided is whether or not the service operated fits the definition of a **fixed route** service. The regulation addresses several types of systems that do not easily fit into the broad definitions of fixed route

and demand responsive service included in the ADA. Specifically mentioned are **vanpools**, which are designated as demand responsive services in

§37.31, and **airport jitney and shuttle systems**, which also are categorized as demand responsive in §37.33.

Case-by-case determinations will be needed for other systems which combine elements of both fixed route and demand responsive service. Appendix D of the regulation offers guidance on this issue. It states that a key factor to be considered is whether riders must request the service, typically by making a call. It further states that **route deviation systems**, in which rider requests determine the exact route, are considered demand responsive services.

☛ Route deviation and a similar type of service known as “point deviation” are discussed in more detail in Section 3 of Chapter 6. Guidance is offered on the design of these types of services.

A final clarification involves “unusual” fixed route systems, such as inclined planes and aerial tramways. For these types of systems, the feasibility of providing complementary paratransit must be evaluated on a case-by-case basis. The length of the system and the area in which it operates are factors to consider. If

As a general rule, service would be considered “under contract” to a public agency if the service would otherwise be operated by the public entity.

paratransit service as typically defined is not practical, reasonable efforts must be made to accommodate persons with disabilities. Providing an alternative which would duplicate the service as closely as possible (or provide improved service) is permitted.

Section 2.

To Whom Must Complementary Paratransit Service be Provided?

The regulations identify three categories of individuals who are eligible for complementary paratransit service. These persons are considered “**ADA paratransit eligible**”. Each public entity providing complementary paratransit service must establish a process for determining ADA paratransit eligibility.

The **first** category of eligibility includes:

“Any individual with a disability who is unable, as the result of a physical or mental impairment (including a vision impairment), and without the assistance of another individual (except the operator of a wheelchair lift or other boarding assistance device), to board, ride, or disembark from any vehicle on the system which is readily accessible to and usable by individuals with disabilities.”

Included in this category are individuals with mental or visual impairments who cannot “navigate the system”. Recognizing destinations, understanding transfers, and being able to distinguish between vehicles at busy transfer stations are all examples of navigating the system. With the exception of assistance provided by the driver or other employees of the service, eligibility under this category is based on a person’s ability to independently use the service. A person traveling with a friend or attendant is still eligible for paratransit service even if they would be able to use the fixed route system with this other person’s help.

The **second** category of eligibility includes:

“Any individual with a disability who needs the assistance of a wheelchair lift or other boarding assistance device and is able, with such assistance, to board, ride, and disembark from any vehicle which is readily accessible to and usable by individuals with disabilities if the individual wants to travel on a route of the system during the hours of operation of the system at a time, or within a reasonable period of such time, when such a vehicle is not being used to provide designated public transportation on the route.”

Eligibility under this category depends on the accessibility of vehicles and routes. A person is eligible for paratransit service if the fixed route on which they want to travel is not yet accessible. Guidance on exactly what constitutes an accessible fixed route is provided in the regulation and explanatory appendix. For example:

- An individual is eligible for paratransit if a vehicle’s lift or boarding device could not be deployed at the stop which they want to use;
- An individual is eligible if they use a “common wheelchair” but cannot be served by the fixed route system because the lift on the vehicle they need to use does not meet the equipment standards contained in Part 38 of the regulation. A common wheelchair is defined as one that can be accommodated by equipment meeting the standards;
- A person is eligible if the bus route on which they want to travel is not 100% accessible.
- Similarly, a person is eligible if they need to travel on a rapid or light rail system that is not yet in full compliance with the

regulation. Full compliance means that all key stations are accessible and one car per train is accessible. An individual would be eligible in this example even if accessible bus service is provided in the same area.

The **third** category of eligibility includes:

“Any individual with a disability who has a specific impairment-related condition which prevents such individual from traveling to a boarding location or from a disembarking location on such system.”

Two important qualifiers to this category are included in the regulations. First, the “specific impairment-related condition” must **prevent** the person from using the fixed route system. Conditions which make getting to or from stops/stations more difficult do not confer eligibility. Second, architectural barriers not under the control of the public entity (such as curb-cuts), and environmental barriers (such as distance, terrain, and weather) do not, when considered alone, confer eligibility. If, however, travel to or from a boarding location is impossible when these factors are **combined** with the person’s specific impairment-related condition, paratransit service must be provided.

Paratransit service also must be provided to a personal care attendant traveling with an eligible rider. In addition to a personal care attendant, the regulations require that service be provided to one companion accompanying an eligible rider. Other persons accompanying the rider are to be accommodated on a “space available” basis. Persons are considered to be accompanying the eligible rider if they are picked up and dropped off at the same locations as the eligible rider.

The needs of visitors with disabilities also are addressed. Complementary paratransit service must be provided to ADA eligible individuals who travel to areas outside of the region in which they

live. If these individuals have been certified as “ADA paratransit eligible” by another public entity, that certification must be honored for up to 21 days. If they have not been certified as eligible by another public entity but claim that they are ADA paratransit eligible, they are entitled to “presumptive eligibility” for up to 21 days. If service is needed beyond this period, they can be required to apply for eligibility in the area they are visiting.

Chapter 4 of this handbook addresses each of these eligibility issues in greater detail. It also provides guidance on establishing a determination process in compliance with the regulations.

Section 3.

What Level of Service Is Required?

Complementary paratransit programs must provide a level of service that is **comparable** to that provided on the fixed route system. Six criteria for determining comparability are included in the September 6, 1991 rule. These state that the paratransit service must:

- Operate in the same **service area** as the fixed route system.
- Have a **response time** (defined as the elapsed time between a request for service and the provision of service) that is comparable.
- Have comparable **fares**.
- Have comparable **days and hours of service**.
- Meet requests for any **trip purpose**.
- Not limit service availability because of **capacity constraints**.

In addition, the regulations establish requirements for several aspects of operation, including:

- no-show policies;

- types of service;
 - subscription service;
 - equipment specifications;
 - maintenance of access equipment;
 - the use of lifts and securement systems;
 - accommodation of mobility aids and life support equipment;
 - the provision of accessible information and communications; and,
 - employee training;
- ☛ The six service criteria and each of the operating standards listed above are discussed in Chapter 5.

Section 4.

How and When Must Service be Implemented?

A plan for providing complementary paratransit service must be submitted on or before January 26, 1992 by all public entities preparing *individual* plans. An additional six months is provided if a *joint* plan is being prepared by two or more public entities with overlapping or contiguous service areas or jurisdictions and they find it impossible to complete the plan by the January deadline. In these cases, all elements of the joint plan that can be completed should be submitted on January 26, 1992. Remaining elements of the plan must be submitted by July 26, 1992. If all elements of a joint plan are not submitted by January 26, 1992, each entity also must provide certification of their commitment to a joint service and that they will maintain current levels of service during the six month extension period.

Full compliance is required as soon as is possible, but no later than January 26, 1997. If it is determined that full compliance is possible in a shorter timeframe, plans will be rejected even if compliance is proposed in less than the maximum five year implementation period.

Persons with disabilities and groups representing them must be consulted in ***all phases*** of the planning process. Outreach efforts are required to inform individuals who are likely to be affected that the plan is being prepared and to invite their input. Plans must be available for public review and comment ***before they are finalized***, and must be provided in accessible formats upon request. At least one public hearing, with adequate notice, also must be sponsored.

Plans must indicate when full compliance with the regulation will be achieved. Full compliance is required ***as soon as is possible***, but no later than January 26, 1997.

If paratransit services in full compliance cannot be implemented within one year, plans must include milestones which show "measured and proportional progress." In its review of plans, UMTA will determine, on a case-by-case basis, whether it believes that progress toward compliance can be achieved in a more expeditious manner. If it is determined that full compliance is possible in a shorter

timeframe, plans will be rejected ***even if compliance is proposed in less than the maximum five year implementation period.***

Implementation of each paratransit plan also must commence on January 26, 1992. An

UMTA decision on the plan is not required before service is initiated. If changes are required as a result of UMTA's review, service design and operating procedures can be adjusted as necessary.

In order to begin implementation, a process for determining who is "ADA paratransit eligible" must be a first priority. If a process is not in place on January 26, 1992, it must be developed as soon thereafter as is administratively possible.

UMTA will review plans and will provide written notice if a plan is disapproved. If a plan, or any portion of it, is disapproved, a revised plan must be resubmitted within 90 days of the receipt of a disapproval letter. The public participation process required for the development of initial plans must be used for any revisions.

☛ Chapter 7 provides guidance on developing a paratransit plan.

Section 5.

Undue Financial Burden Waiver Provisions

The law and regulations consider the financial realities facing public transit systems. Five provisions, listed below, were included to minimize the potential financial burden of complying with the requirements of the regulations.

- Service provided to ADA Paratransit Eligible individuals by other paratransit providers in the area can be counted as part of the total effort in the area.
- The service area that must be covered is limited to comparable fixed route corridors.
- Required eligibility is limited to those who cannot otherwise use the fixed route system.
- Fixed route bus systems are considered accessible if lift buses are available by advance reservation through Call-A-Lift-Bus or On-Call Bus programs.
- A phase-in period of up to 5 years is provided for full implementation of complementary paratransit service.

In cases where undue financial burdens will still occur, the regulations provide for waivers to be granted by the UMTA Administrator. It is important to note that waivers only apply to the six service criteria described in Section 3 of this chapter. Operating requirements included in the regulation must be met without exception.

An undue financial burden waiver can be requested either at the time initial plans are submitted or during the course of implementation. Waivers can only be requested on January 26, 1992, if it is determined that:

- full compliance by January 26, 1997 is not possible; or,
- measured progress cannot be made *in each year*. A waiver should be requested, for example, if it is determined that little or no progress will be possible in the first year.

Requests for waivers must demonstrate that an undue financial burden will result from the implementation of the required paratransit service. Only those costs associated with providing required services can be counted toward an undue burden.

Waivers can be requested during the course of implementation if circumstances assumed in the initial plan change and full compliance by January 26, 1997 is no longer possible.

Requests for waivers must demonstrate that an undue financial burden will result from the implementation of the ***required*** paratransit service. Only those costs associated with providing required services can be counted toward an undue burden. Costs incurred providing services to persons who are not ADA paratransit eligible or services which go beyond the required service criteria cannot be included.

The regulations identify several factors that will be considered by UMTA in determining whether or not an undue financial burden exists. Waiver requests

must contain information which will allow UMTA to evaluate each of these factors.

☛ Appendix F of this handbook provides a listing of these factors and other information concerning undue financial burden waiver requests.

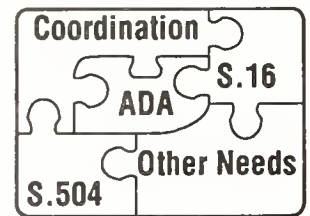
If a waiver is approved, the public entity may be asked to provide as much service as possible without incurring an undue burden. UMTA also may ask that the plan be changed if it feels that more efficient and effective ways to provide service exist. This can include a requirement to work more closely with other providers of paratransit service in the area. UMTA also can ask that complementary paratransit

service be provided along key routes (defined as routes that run at least hourly) during morning, noon, and evening peak periods, even if to do so would cause an undue financial burden.

Finally, it is important to note that *if waivers are granted, they will be for a limited and specified time period*. If a request is approved, a waiver will be granted for an amount of time beyond the allowed implementation period which is needed to achieve full compliance. This period of time will be determined from information contained in the plan and UMTA's evaluation of the public entity's financial and operating situation.

3

Complementary Paratransit Service Requirements as Part of a Broader Paratransit Policy



Paratransit is considered in the ADA from a narrow legal and civil rights perspective. The amount of service required is based on a minimum standard of comparability for those persons with disabilities unable to use fixed route systems. There are transportation needs which go beyond the scope and intent of the ADA. Planning for some of these needs is a requirement of Section 16(a) of the Urban Mass Transportation Act of 1964, as amended (UMT Act), which states that:

“...special efforts shall be made in the planning and design of mass transportation facilities and services so that the availability to elderly and handicapped persons of mass transportation which they can effectively utilize will be assured...”

Services provided beyond the minimum requirements of the ADA cannot be counted, however, in a calculation of undue financial burden. While it is important to consider and plan for other needs, you must ensure that ADA required service is provided. If you expect to face financial constraints during the implementation of your ADA paratransit plan, you may have to examine and prioritize your existing service. Some reduction in efforts not required by the ADA may be necessary. Major reductions in existing service can be considered a factor in deciding to request an undue financial burden waiver.

There are transportation needs which go beyond the scope and intent of the ADA.

Needs not Addressed by the ADA

Some of the needs which are *not* addressed by the complementary paratransit service requirements of the ADA include:

- (1) *Persons with disabilities who reside outside of the defined service area or who need to travel to destinations outside of the service area.* Nationwide, only five percent of all trips are made on public transit.¹ The vast majority of all trips are made in automobiles. This is due not only to the public's preference for private automobile travel but because public transit is often designed to meet travel needs to and from city centers. Transit is often not available to meet suburban and rural travel needs. Private automobile travel, particularly independent auto travel, is not available, however, to many persons with disabilities. Adapted vehicles can cost twice or three times as much as a standard car. Many persons have disabilities which preclude the independent operation of an automobile. National studies suggest that forty-five percent of all persons with disabilities live in households without automobiles.² Thirty-nine percent of this population has only occasional access to an automobile through family or friends. Clearly, many individuals with disabilities who do not live in close proximity to public transit services have few or no transportation

options and need to be considered in an areas' overall transportation policy and plan.

(2) ***The growing population of older Americans.*** Between 1900 and 1980, the percentage of Americans 65 years of age and older grew from 4.1 percent to 11.3 percent.³ In actual numbers, there were 3.1 million older persons in 1900 and 25.5 million persons over 65 in 1980. As Table 3.1 indicates, there will be almost 35 million persons 65 years and older by the year 2000. Moreover, the fastest growing segment of the population are those persons over 85 who are likely to be most in need of transportation assistance. While the total U.S. population is projected to increase by 20 percent between 1990 and 2030, the 65-74 age group will increase by 96 percent, the 75-84 age group by 116 percent, and the 85+ age group by **150 percent.**⁴

As with the population of persons with disabilities, many older Americans live in areas that are not served or not served well by public transit. Transportation

plans should consider the needs of this population. Conventional fixed route service, even when fully accessible, will not be enough to meet the needs of this growing population.

(3) ***Persons living in poverty.*** A lack of transportation is often cited as a major problem by anti-poverty agencies and work training programs which serve low-income persons. Again, lack of independent access to an automobile is an obstacle to getting a job and becoming economically self-sufficient.

Coordination

If public paratransit services are narrowly defined and limited to only those persons who are ADA paratransit eligible, significant duplication with local human service transportation programs will likely be the result.

Coordinating paratransit services with human service agency transportation programs also remains a priority concern. The ADA paratransit eligible population overlaps with several

other segments of the general public. Many ADA paratransit eligible individuals are elderly. Many individuals are clients of mental health, mental retardation, or vocational rehabilitation programs. If public paratransit services are narrowly

Table 3.1

PROJECTED POPULATION OF OLDER AMERICANS (in Thousands)

(in Thousands) Year	Total U.S. Population	65-74	75-84	85+
1900	250,410	18,373	9,933	3,254
2000	268,266	18,243	12,017	4,622
2010	282,575	21,039	12,208	6,115
2020	294,364	30,973	14,443	6,650
2030	300,629	35,988	21,487	8,129

Reprinted in part from "The Vital Link: Aging and Community Transportation", Community Transportation Reporter, February, 1991.
Source: Census Bureau, Current Population Reports, January, 1989.

defined and limited to only those persons who are ADA paratransit eligible, significant duplication with local human service transportation programs will likely be the result. These other programs may still have to operate separate services to meet the needs of clients who are not within the ADA service area or who are not ADA paratransit eligible. This type of fragmented approach can require more total public resources to meet the transportation needs of persons with disabilities, older Americans, and others.

Considering Service Change Impacts

Many existing paratransit systems currently are coordinated with other human service programs and serve a broader group of people than those who are ADA paratransit eligible. Many paratransit systems designed under Section 504 also cover a larger service area than the minimum area defined by the new ADA regulations. It is not the intent of the regulations to have these services rolled back to the minimum standards described. Rather, transit providers should ensure that within their total paratransit system, the level of service provided to ADA paratransit eligible persons meets the standards set forth in the regulations.

While providing a more comprehensive service should be a goal, priority must be

given to meeting the minimum requirements established under the ADA. Eligible individuals have a civil right to complementary paratransit service. Not providing this service in accordance with the regulations may not only jeopardize receipt of federal transportation funding but open transit agencies to potential legal action.

As part of the paratransit planning process, public entities should attempt first to meet ADA requirements in addition to other services which they have elected to provide. If it becomes necessary to reduce existing services in order to comply with ADA requirements, the impacts that a service change will have on present riders should be considered. Individuals may have made housing, employment or other decisions based on the availability of present transportation services. Efforts should be made to work with other agencies to develop transportation alternatives.

Consideration also should be given to improving fixed route service to help meet this need. If other alternatives do not exist, consideration should be given to honoring past eligibility determinations as a way to make a transition to a new service policy. The public, consumers, and decision-makers at all levels also should be involved before existing levels of service are changed.

4

Determining ADA Paratransit Eligibility



The Americans with Disabilities Act and its implementing regulations establish categories of persons who are eligible to receive paratransit services complementary to fixed route services. These persons are functionally defined, based upon their inability to use existing fixed route service. Eligibility of an individual must then be applied to each trip request. The regulations also establish standards for the process of determining eligibility and require that an appeal process be established. The process for certification and for appeal must be published by the transit provider.

This chapter begins with a discussion of the importance of determining who is ADA paratransit eligible for complementary paratransit service and how this eligibility is applied to trip requests. Complementary paratransit service provided as a civil right by the ADA is specifically defined by the law. It will be important to understand this definition, and the reasons for it, in establishing an eligibility certification process.

Section 2 of this chapter will discuss *who* is eligible to receive the complementary paratransit service guaranteed by the ADA. The regulation establishes three categories of eligibility. Because eligibility is based upon functional considerations, relating the disability of the customer to the capacities and operation of the system in question, it is useful to consider eligibility through the operation of four “tests”. The “markers” provided by these tests can then be used to determine whether or not an individual’s eligibility for complementary paratransit generally is appropriately applied to a particular

trip request. These tests, and examples of how they may be applied, comprise Section 3. An effectively designed eligibility certification process will facilitate the trip-by-trip determination that will be required under the regulation.

Section 4 discusses a proposed certification process. Section 5 discusses the appeal process that is required under the regulation. Section 6 deals with reciprocal and presumptive eligibility. Section 7 discusses the provision of paratransit services to persons travelling with the eligible individual.

Section 1.

Who Are the “ADA Paratransit Eligible”

As a civil rights law, the ADA established a broad definition of those whose rights are protected. Upwards of 43 million Americans are estimated to be protected against discrimination by some aspect of the law — nearly one-in-five of the total population. The new law establishes a civil right to integrated, accessible fixed route transit service for persons with disabilities. As the various provisions of the law take effect, and as new equipment and facilities are put into place, it is expected that transit services for persons with disabilities will largely be provided by these fixed route services.

The new law recognizes, however, that in some locations a fully accessible fixed route service will take a number of years to put in place. To protect the rights of persons with disabilities during the transition to accessible fixed route services, the ADA requires that

paratransit service complementary to the fixed route system be put into place. Moreover, even when the fixed route system is fully accessible and complying with all applicable standards, some persons with disabilities still will not be able to navigate these systems. The right to paratransit, complementary to the fixed route service, for this small sub-group of the population with disabilities, will continue for the long-term, insofar as these persons are unable to use those fixed route transit services.

In establishing eligibility for complementary paratransit service under the new law, it is important to remember that the ADA makes no attempt to define the overall transportation needs of persons with disabilities. Nor does the ADA guarantee that these needs will be met.

These needs may be met by a variety of federal, state and local programs providing transportation services to persons with disabilities and are not directly affected by the new law. As a civil rights law, the ADA deals with transit systems and their utility for persons with

disabilities. The ADA's protection of a civil right to paratransit complementary to fixed route service is thus limited in its scope. Nothing in the ADA prevents or limits providing transportation services to others among the population with disabilities or more generally to the elderly or to others who are transportation disadvantaged.

Any discussion of ADA paratransit eligibility must be understood within this context. It is only for the provision of ADA paratransit eligible services that "undue financial burden" may be calculated. Services provided to other transportation disadvantaged individuals are at the

option of the provider and thus are unrelated to compliance with the ADA. Even if a provider decides to use statistical modeling for the purposes of determining undue financial burden, they will need to be able to identify those users of the paratransit service who are ADA paratransit eligible.

Where a transit provider now has no paratransit service in place, the law and its implementing regulations provide the baseline for creating the new service. Where paratransit now is in place, the persons described by the law as "ADA Paratransit Eligible" have rights to service that may be different from the service now in place. Such service may, for example, currently be restricted by trip purpose, which is not permitted for ADA complementary paratransit. This situation

would require some reconfiguration of these services, as noted in Chapter 5 of this handbook.

Section 37.125(a) of the ADA implementing regulations requires that each public entity "shall strictly limit 'ADA Paratransit

Eligibility' to individuals specified" in the regulations. This section of the regulations makes it clear that although the development of eligibility determination procedures are properly the subject of consultation with members of the disability community as part of the required public process, the definition of ADA paratransit eligibility cannot be modified. The ADA and its implementing regulations establish a right to paratransit only under a particular set of circumstances related to the individual and the transit system. Only with a clear definition of ADA paratransit eligibility can the delivery of those services, and compliance with the law, be demonstrated.

The ADA and its implementing regulations establish a right to paratransit only under a particular set of circumstances related to the individual and the transit system. Only with a clear definition of ADA paratransit eligibility can the delivery of those services, and compliance with the law, be demonstrated.

If a transit operator already provides paratransit services to a wider group of transportation disadvantaged persons, and already has a certification standard in place, it must still undertake the process of determining who is specifically entitled to service under the ADA and for what trips. The paratransit plan to be submitted by the transit provider must demonstrate how these minimum standards of the ADA will be met. Services provided to a broader group of persons with disabilities or to other transportation disadvantaged persons do not mitigate the requirements to meet these standards.

Section 2.

Regulatory Categories of Eligibility

Three categories of persons with rights to complementary paratransit are established by the ADA.

A transitional category will exist until and to the extent that the fixed route system is not capable of providing accessible service to persons with disabilities. Any person with a disability who can use an accessible vehicle, but for whom **any** desired trip cannot be made because the fixed route service they need to use is not yet accessible, is deemed eligible. ADA paratransit eligibility for members of this group is directly related to the accessibility and operation of the transit system in question, as well as the specifics of the individual's disability. This category includes persons who presently qualify under the 1986 Section 504 regulations for "special services" and includes persons who use wheelchairs, walkers or braces and others whose disabilities prevent them from utilizing an inaccessible vehicle or facility.

The other categories are made up of individuals who, because of the nature of their disabilities, cannot navigate even a transit system that is otherwise accessible. These categories are defined narrowly under the ADA. The first includes

individuals who because of their disability cannot independently board, ride and/or disembark from an accessible vehicle. The USDOT regulation assumes that an individual will not and need not be able to operate a boarding system such as a wheelchair lift, extendable ramp or securement device. Operator assistance with these specific functions is expected. The presence of a traveling companion does not effect the evaluation of the eligible individual's ability to independently utilize the transit service. A person traveling with a friend or attendant is still eligible for paratransit service even if they would be able to use the fixed route system with this other person's help.

Another category is made up of those who have impairment-related conditions that prevent them from getting to or from a boarding or disembarking location. The ADA legislative history indicates that this is intended to be a very narrow classification, relating to an individual's particular functional disability. Although this eligibility is most closely related to a diagnosis of disability, in many cases there will nonetheless need to be functional evaluation of its application to a particular system and a particular trip. Examples of eligibility based on this category would include severe, chronic fatigue related to HIV infection and AIDS, heat sensitivity due to cardiovascular disease and hypothermia due to quadriplegia.

Two additional groups are defined by the regulation. An individual who has been certified by another transit provider will be considered eligible by another system. A person traveling as a companion of a person who is ADA paratransit eligible is deemed eligible for that trip. The companion need not be a family member. Additional traveling companions must be accommodated on a space available basis only. Personal care attendants required by the eligible individual for travel are considered as mobility aids and not as companions for this purpose.

Persons in these last categories will retain ADA paratransit eligibility for the long term, even after the system meets all accessibility requirements for vehicles and facilities.

Note that place of residence does not enter into a determination of ADA paratransit eligibility. Individuals may request certification from a covered entity even though they do not live in the transit service area or even in a community in its service district. This would be the situation, for example, of a commuting wheelchair user who could drive to a parking facility from an outlying area, but who there is unable to board the vehicles providing service in the center city. Such an individual might have ADA paratransit eligibility certification from her home transit district, or may live in a region without transit. Such an individual has the same right to use the transit system as any out-of-town commuter. ADA complementary paratransit is an integral part of that system.

Note also that the regulations make explicit the eligibility of persons whose disability is temporary. Although the disability is temporary, the standards that are applied are the same as those used generally. Certification of eligibility in such cases would properly carry a specific expiration date, differing from the usual period for recertification.

An individual may be eligible for ADA paratransit whose disability is intermittent. It is quite possible, for example, that an individual may be able to walk, if with difficulty, on some days or for some periods, but otherwise find it necessary to utilize a wheelchair. The intermittent disability would, of course, directly affect the ability to board certain vehicles or travel certain distances. Such individuals will need to be certified for eligibility based upon the most limiting

aspects of their disability (e.g., as if they used a wheelchair for all trips). Trip-by-trip determination would then be required.

Section 3.

Applying Eligibility to Trip Requests

The operational meaning of ADA paratransit eligibility is quite complex. ADA paratransit eligibility is based on a functional, rather than medical, model. Persons are not qualified or disqualified on the basis of a specific diagnosis or disability. An individual will be certified as ADA paratransit eligible if there is any part of the system in the designated service area which cannot be used or navigated by that individual because of a disability. In operation, ADA paratransit eligibility will be based upon whether the fixed route transit system can provide its service to the particular individual for a particular trip. Even within a particular

system, eligibility will be applied, in most cases, on a trip-by-trip basis. The application of a person's eligibility will be determined by both the needs of that individual, as established by the eligibility certification process, and by the operation of the system along a specific route. Eligibility will effectively be determined by using a set of "tests", particularized to the transit system and its operation.

We will not consider in this section the question of whether a particular trip request is "eligible" in consideration of its beginning and end points. That question properly pertains to the definition of a service area and is discussed fully in Chapter 5.

The existence of three categories of customers who are eligible for certification as ADA paratransit eligible, categorized

Note that place of residence does not enter into a determination of ADA paratransit eligibility. Individuals may request certification from a covered entity even though they do not live in the transit service area or even in a community in its service district.

by four subsections of regulation and some of whose eligibility is transitional and others whose eligibility is conditional, may seem to make the certification process extremely difficult. An effective process can be developed, however, which will not only certify eligibility for the individual but also facilitate the application of that eligibility to a particular trip.

It will be necessary in the first place to determine whether or not an individual's disability prevents her from utilizing any of the services provided by a covered entity. This determination must be made in regard to each and every part of the system and throughout all the hours of its operation. The application of this eligibility to a particular trip is, thereafter, a functional one:

- Does the disability prevent the individual from getting to and from a station/stop at point of origin or destination? If so, then the trip is eligible.
- Can the individual board and utilize the vehicle at the station/stop? If the vehicle is inaccessible, the person is eligible.
- Can the individual independently recognize the destination and disembark? If not, the trip is eligible.
- If a trip involves transfers and connections, are the paths of travel between lines or modes accessible and navigable by the individual? If not, the trip is eligible.

Each of these "tests" is examined below.

TEST ONE - Does the individual's disability prevent getting to and from a station/stop at point of origin or destination?

Much commentary, in the legislative history of the ADA and throughout the regulatory process, has been devoted to the situation of the individual who cannot, because of disability, successfully arrive at a station/stop or travel to a final

destination after disembarking. This category is meant to be narrowly defined. A distinction is made in the regulations between those who have difficulty (or simply find it unpleasant) to travel to or from a station stop and those whose disability *prevents* them from doing so. It does not include, for example, an elderly individual who finds it difficult to walk three blocks to a bus stop. A transit provider is not obliged to provide paratransit service to an individual because its service area is not fully built with curb cuts.

The specific impairment(s) of an individual must be considered. For example, although winter conditions of cold, ice and snow do not in themselves make a quadriplegic wheelchair user ADA eligible for paratransit, a highly elevated danger of hypothermia experienced by that individual would make her eligible during periods of very cold weather. The susceptibility to hypothermia is "an impairment-related condition" which establishes eligibility. Chronic severe fatigue related to HIV infection would establish eligibility but a diagnosis of AIDS by itself does not. An arthritic or cardiac condition which prevents boarding a vehicle or entering a station — as distinguished from a condition that merely makes such climbing difficult — establishes eligibility.

Included among the eligible under this test are those who, because of blindness or visual impairment, or because of a developmental or cognitive disability, would be unable to find their way to or from a station stop. Although many people with these disabilities have been trained to make specific trips using fixed route service, or to navigate the fixed route system under certain situations, this training may not be useful for a particular trip origin or destination. An individual who has been trained to use the system to travel to and from a particular destination independently and therefore can utilize the fixed route service for that purpose

(say, the daily commute to and from a place of employment) cannot apply eligibility to that trip. However, an exceptional trip (to a restaurant, for example) would be ADA eligible. In addition, if service disruptions, such as re-routing due to construction, make the training temporarily inappropriate, the customer is eligible for those trips.

TEST TWO - Can the individual board and utilize and disembark the vehicle at the station/stop?

For the most part, this test will be utilized during the transition to a fully accessible fixed route system. If a transit customer uses a wheelchair, and the system cannot guarantee that the customer will be able to board any vehicle, at any time, then that customer is ADA paratransit eligible generally. Note, however, that this eligibility cannot be applied to a trip on a route served by only lift- or ramp-equipped buses. A person who uses a wheelchair is not *on that basis* ADA paratransit eligible for trips served by an accessible, lift- or ramp-equipped bus. If not all the buses in a system, or all the buses on a particular route, are lift- or ramp-equipped, however, that individual is entitled to travel using paratransit when fixed route transit services are not accessible. This requirement for trip-by-trip analysis will become more limited as the system becomes fully accessible. The use of "on-call bus service", scheduling an accessible fixed route bus upon request, can be utilized to meet the requirement for paratransit services. A paratransit "feeder service" which connects with accessible fixed route stations could also be utilized in this situation but would need to be carefully coordinated with fixed route scheduling.

It should also be noted that if some operational factor prevents utilization of an accessibility feature and this situation excludes an individual with a disability from fixed route service, the trip is eligible for paratransit. This would be the case, for

example, when a bus lift cannot function at a stop where there is no raised sidewalk or in steep terrain. If bus lifts utilized by a transit system were installed before the effective date of USDOT regulations, and these lifts are unable to provide access for a particular sort of wheelchair that could be accommodated by a conforming lift, individuals using such wheelchairs in such situations are ADA paratransit eligible.

TEST THREE - Can the individual recognize the destination and disembark?

This test will form the basis of eligibility for many individuals with visual impairments and developmental and cognitive disabilities. Some persons with Alzheimer's disease will qualify under this test. To some extent, the same conditions discussed relating to Test One would apply. But it is certainly possible that an individual, who is trained to get to and from a transit stop, might nonetheless be unable to utilize the fixed route service because the system fails to reliably announce station stops. USDOT regulations provide for the announcement of stops on fixed route service. Even after this rule goes into effect, however, this would still be the situation in a subway system until all trains are equipped to permit such announcements to be made in compliance with ADA regulations. As with the first test, travel training may not be sufficient to permit independent travel to or from stops that are not standard for the individual.

TEST FOUR - If a system involves transfers and connections, are the paths of travel between lines or modes accessible and navigable by the individual?

This test for eligibility will be a transitional matter for some individuals, for others it may be a long-term basis for eligibility. An individual might, for example, be able to board a vehicle at each terminus of the trip, but be unable to make the level change between different platform levels. So long as this situation exists, that person will have ADA

eligibility. This eligibility would then be applied to a particular trip request if the fixed route alternative involves using such a facility.

A person with a cognitive disability might be able to handle each segment of the trip with little difficulty, but find it impossible to successfully wend her way through a complex and busy transit station.

Although the application of this eligibility will also obviously be on a case-by-case basis, if conditions exist within the system where it is reasonable to assume that the individual can become disoriented and lost, then that individual will be ADA paratransit eligible for such trips for the long term.

Another example of eligibility based upon this test is an individual who, because of a cardiac condition, cannot traverse the distance between one vehicle and another. For example, transfers at an intermodal terminal might involve travel of hundreds of meters or more. Here again, application is on a trip-by-trip basis.

Table 4.1 relates a number of different types of disabilities to eligibility. It also identifies factors that must be considered in making trip-by-trip determinations. All of the "Determining Factors" listed must be considered for each type of functional impairment. Please note that this list is not intended to be exhaustive of all possible disabilities or situations. Nor can one assume that an individual is automatically eligible because she has a disability listed here. Rather, this chart is meant to list common sorts of disabilities and the functional impact the disabilities may have upon transit use. It is meant to suggest the sorts of functional considerations that need to be made for a variety of situations.

Section 4.

Certifying Eligible Individuals

A written explanation of each transit provider's ADA paratransit eligibility certification process must be prepared.

This explanation must:

- **BE AVAILABLE AND DISTRIBUTED TO ALL WHO REQUEST IT**
- **BE MADE AVAILABLE IN ACCESSIBLE MEDIA SUCH AS BRAILLE, LARGE PRINT AND AUDIO TAPE**
- **DESCRIBE THE PROCESS FOR APPEALING DETERMINATIONS OF NON-ELIGIBILITY**

In addition, the certification process must:

- **BE CONCLUDED WITHIN TWENTY-ONE DAYS OF THE SUBMISSION OF A PROPERLY COMPLETED APPLICATION**
- **PROVIDE INDIVIDUALS CERTIFIED AS ADA PARATRANSIT ELIGIBLE WITH DOCUMENTATION THAT MAY BE UTILIZED AS IDENTIFICATION FOR RECIPROCAL SERVICES**

As was discussed in the sections above, the ADA certification process also can and should provide evaluation and classification of eligible individuals, so that determination of trip eligibility can be facilitated. The certification process can be used to evaluate and classify the individual's abilities across a number of "fields" that can be encoded into the individual's record. The classification assigned to each individual will provide the paratransit scheduler the information needed to relate functional abilities to the requirements of fixed route travel for a specific trip request. This information also can be used to ensure that appropriate equipment is dispatched to meet the needs of the customer.

Table 4.1 - Eligibility by Functional Impairment/Disability

Functional Impairment/ Disability	Type of Eligibility	Determining Factors
Ambulatory Disability, Uses Wheelchair	Conditional (2,3)*	<ul style="list-style-type: none"> - Availability of accessible fixed route service - Distance to/from bus stop or rail station for trip requested - Environmental conditions (terrain)
Ambulatory Disability, Uses Walker	Conditional (2,3)	<ul style="list-style-type: none"> - Distance to/from bus stop or rail station for trip requested - Availability of accessible fixed route service - Environmental conditions (terrain)
Ambulatory Disability Uses Braces	Conditional (2,3)	<ul style="list-style-type: none"> - Distance to/from bus stop or rail station for trip requested - Availability of accessible fixed route service - Environmental conditions (terrain)
Ambulatory Disability, Uses Other Mobility Aid	Conditional (2,3)	<ul style="list-style-type: none"> - Distance to/from bus stop or rail station for trip requested - Availability of accessible fixed route service - Environmental conditions (terrain)
Temperature Sensitivities	Conditional (3)	<ul style="list-style-type: none"> - Distance to/from stop/station - Waiting time at Stop/station - Temperature
Cardiac Condition	Conditional (3)	<ul style="list-style-type: none"> - Distance to/from stop/station - Environmental conditions (temperature, terrain)
Pulmonary Condition	Conditional (3)	<ul style="list-style-type: none"> - Distance to/from stop/station - Environmental conditions (temperature/terrain)
Arthritis	Conditional (3)	<ul style="list-style-type: none"> - Distance to/from stop/station - Environmental conditions (temperature/terrain)

* Indicates category of eligibility. (1) = unable to board, ride, or disembark from an accessible vehicle; (2) = able to use accessible vehicle but accessible vehicle is not available; (3) = unable, due to impairment related conditions to get to stop/station.

Table 4.1 (continued)

Functional Impairment/ Disability	Type of Eligibility	Determining Factors
Conditions resulting in severe fatigue (HIV, radiation/chemotherapy, dialysis)	Conditional (1,3)	<ul style="list-style-type: none"> - Distance to/from stop/station - Environmental (temp./terrain)
Severe lack of coordination/motor function (e.g., cerebral palsy, brain/spinal/peripheral nerve trauma, neurological conditions)	In all cases (1,3)	
Moderate lack of coordination/motor function (e.g., cerebral palsy, brain/spinal/peripheral nerve trauma, neurological conditions)	Conditional (2,3)	<ul style="list-style-type: none"> - Distance to/from stop/station - Availability of accessible fixed route service
Profound or severe mental retardation	In all cases (1,3)	
Mild or moderate mental retardation	Conditional (1,3)	<ul style="list-style-type: none"> - Has person received travel training for trip requested?
Psychiatric disabilities causing disorientation (as distinct from behavioral)	In all cases (1,3)	
Visual impairments (blindness, restricted vision)	Conditional (1,3)	<ul style="list-style-type: none"> - Has person received travel training for trip requested? - Effective fixed route communications practices in place (announcements, card systems, etc.)? - Physical barriers in the environment
Hearing Impairments	Conditional (1)	<ul style="list-style-type: none"> - Effective fixed route communications practices in place (signage, card system, etc.)
Communication Disabilities (disability related speech or reading impairments)	Conditional (1)	<ul style="list-style-type: none"> - Effective fixed route Communications practices in place (signage, card system, etc.)

Alternative Procedures for Determining ADA Paratransit Eligibility

Because the factors needed for such classification are primarily of a functional nature, medical or diagnostic information by itself will, in most cases, provide little useful information. Few transit providers will be able to relate a diagnosis of a disability to the ability to use transit.

Medical doctors, moreover, are rarely trained to make functional evaluations of their patients' abilities to undertake the activities of daily living. USDOT ADA regulations permit the requirement of medical certification in determining ADA paratransit eligibility. Transit providers may wish to consider whether such a requirement should be made a mandatory part of every ADA

paratransit eligibility certification. As an alternative, medical information could be obtained only on an "as needed" basis. Such documentation would be limited primarily to a specific impairment related to a disability. For example, a transit provider might wish

documentation of a tendency to hypothermia for an individual who uses a wheelchair, or of a disabling cardiac condition, when such are the basis of a request for eligibility.

Documentation from sources such as an independent living or rehabilitation counselor, physical therapist or other such professional, would prove more useful in establishing an individual's ability to utilize transit services and should certainly be considered as an alternative to documentation from a physician. Such evaluations can be expensive, however, and many persons with disabilities do not participate in such programs. If a transit provider plans to require documentation of

a functional analysis, it may want to consider retaining one or more professionals in the field to whom applicants can be referred for certification and classification. In any case, providers must not establish any documentation requirement which will place a significant financial burden upon an individual attempting to access transit.

In evaluating the application of a wheelchair user, whose basis for ADA paratransit eligibility is the inaccessibility of the buses in service, medical or functional evaluation is expensive and superfluous at best. The claim of eligibility by a person who is known to be blind, based upon the inability to safely navigate the system, hardly seems to require third-party documentation. For these reasons, transit providers could utilize an

Documentation from sources such as an independent living or rehabilitation counselor, physical therapist or other such professional, would prove more useful in establishing an individual's ability to utilize transit services and should certainly be considered as an alternative to documentation from a physician.

ADA eligibility process which generally relies on self-certification of a person's functional abilities, supplemented by additional documentation only as is required to effectively evaluate and classify an individual's specific impairments.

Documentation would also appropriately be

required if a particular claim appeared to be unsupported by the information provided in the application or to be fraudulent.

The sample "Request for Certification of ADA Paratransit Eligibility", provided in Appendix D, will allow transit providers to obtain the information necessary to establish eligibility and to apply it to particular trip requests. Although a question is asked regarding the nature of the disability — a "diagnostic" question — the bulk of the form requests information regarding the functional abilities of the applicant. Note that the questions must be generalized to the situation that prevails in any and every part of the system. If a

transit provider operates inaccessible buses or light or rapid transit lines, it is necessary to know how this could impact the applicant. A system that operates only accessible buses would not need to ask questions regarding a wheelchair user's ability to board a bus. As noted above, the application of ADA paratransit eligibility to a particular trip will be made on a trip-by-trip analysis.

Cost, both for the transit agency and for paratransit customers, also will need to be considered in determining requirements for periodic recertification. Such recertification requirements are permitted under USDOT

regulations, on a "reasonable" basis. This recertification could take place annually, but this would place obvious burdens upon both customers and providers. If routine recertification is required, a three-to-five year period is suggested. Policy regarding recertification can be flexible, scheduling recertification for persons whose functional abilities are likely to change while providing no recertification for those whose functional abilities are not expected to change over time. The situation would be similar to that of certifying persons with temporary disabilities.

The sorts of documentation that will be required, alternative resources that may be available for evaluation, and requirements for recertification should be determined through the public process required by the regulations and discussed in Chapter 8 of this handbook. If the transit provider decides to utilize an outside agency or consultant for the provision of certification and evaluation, it still must ensure that the procedures to be used are fully considered through the public process.

Analyzing ADA Paratransit Eligibility for Trip-by-Trip Evaluation

Many transit systems will utilize the information gathered in the certification process to create files regarding each paratransit customer. Such files may be computerized to allow expeditious review of trip-by-trip eligibility and assignment of

appropriate vehicles. The answers provided to each functional question on the "Request" can be encoded in an identification number assigned to the individual. This coded information would then be applied by

paratransit schedulers and/or dispatchers to each of the four tests described in section 3 to determine trip-by-trip eligibility.

For example, if a paraplegic wheelchair user applies for ADA paratransit eligibility solely on the basis of an inability to board an inaccessible vehicle, she will be eligible if any bus utilized by the system is inaccessible. That information is encoded into her identification number. If she then requests a trip that is on a route exclusively serviced by accessible buses, she will be advised that the trip is not eligible and that she can use fixed route transit. If the route in question is not 100% accessible (e.g., if only every other bus or only particular scheduled runs are lift equipped), that route is not considered accessible. Note, however, that if the system has the capacity to schedule an accessible bus for the requested trip, and the trip is thereby made accessible, such an arrangement would meet the requirement for the provision of paratransit.

The sorts of documentation that will be required, alternative resources that may be available for evaluation, and requirements for recertification should be determined through the public process required by the regulations.

In another case, a person certified as eligible because of a cognitive disability may routinely utilize fixed route transit for trips to-and-from a place of employment. If that person wishes to make a trip which would involve a transfer at a busy terminal, the data encoded into their identification number would alert the scheduler to the fact that such a trip using fixed route transit is inappropriate and that paratransit must be scheduled.

A person certified as eligible because of severe chronic fatigue would be eligible if the requested point of origin or destination, while within the service area of fixed route service, is nonetheless farther than the individual can safely travel. Such a request would also be appropriate if the terrain involved hills unmanageable by the person with this disability. A trip to-and-from points located directly at a bus stop would not be ADA eligible in this case. If, however, the person's certification indicated that she could not safely stand at a bus stop through the headway used at that time on that route, or could not do so in extremely cold conditions then prevalent, paratransit must be provided. It would be possible to schedule paratransit as feeder service to accessible fixed route service, although the utilization of such feeder service is somewhat problematic and is not required by the regulation. Feeder service is a service option discussed in "Types of Service" in Chapter 5 of this handbook.

As indicated in the last examples, the conditions upon which the application of ADA eligibility to a particular trip are made can be multiple and quite specific. It is for this reason that the original certification process must thoroughly evaluate and classify the functional situation of the applicant.

Documenting ADA Paratransit Eligibility

A person determined to be eligible for ADA paratransit services must be provided some form of documentation that can be used as identification when the person travels to another transit area. A simple letter stating eligibility is acceptable. This documentation must include the name of the eligible individual, the name of the certifying transit provider and telephone number of the provider's paratransit coordinator, an expiration date, if any, and any conditions or limitations on eligibility. If the individual has indicated a need for a personal care attendant, this must be noted. Figure 4.1 provides a sample identification card that could also be used for this purpose.


Required Documentation of ADA Paratransit Eligibility

- **Name of the eligible individual.**
- **Name of the certifying transit provider.**
- **Telephone number of the provider's paratransit coordinator.**
- **Expiration date (if any).**
- **Any conditions or limitations on eligibility.**
- **Need for a personal care attendant.**

Figure 4.1
Sample ADA Paratransit Identification Card

Security Seal
 (public entity logo)

FRONT

Photograph 	Certificate of Eligibility for ADA Paratransit Service	
	Name _____	
	I.D. # _____	
Signature _____	Date Issued _____	Expiration Date _____
Eligibility Conditions _____		Travel with PCA Yes <input type="checkbox"/> No <input type="checkbox"/>

BACK

The person identified on this card has been
 determined "ADA Paratransit Eligible"
 in accordance with the provisions of 49 CFR Part 37
 and may be entitled to receive complementary
 paratransit service subject to the provisions thereof.

_____ (signature of public entity representative)

_____ (name of issuing public entity)

_____ (city/town) _____ (state)

Paratransit Coordinator's
 Phone #: _____

Section 5.

Appealing a Determination of Non-Eligibility

This chapter began with a reminder that the ADA establishes a civil right to paratransit for individuals who cannot, whether because of their disability or because of the inaccessibility of the fixed route system, otherwise utilize the transit system. Because complementary paratransit is deemed to be a civil right, inappropriate denial of such service is a serious matter. A fair and effective review and appeal process is required by the regulations and is in the interests of all parties. Public involvement in the development of the review and appeal process is required, and a description of the process to be utilized must be part of the paratransit plan to be submitted to UMTA.

Because ADA paratransit eligibility is established as a civil right, there is for the transit provider a special obligation to ensure that "due process" is observed.

Therefore every decision to deny ADA paratransit eligibility should be reviewed in the first instance by a supervisor familiar with the requirements of the ADA and its operation in the system. The appropriate place for this initial review will, of course, vary with the size and organization of the system.

If the decision to deny is confirmed, the notice of denial sent to the applicant must include the reasons for the denial and the procedures which may be utilized to appeal the decision. Any and all notices sent to the applicant must be in a format that can be utilized by the applicant (e.g., a braille letter to a blind applicant who utilizes braille). If a limitation on the time period permitted for appeal has been established, this should be clearly stated.

In any case, the period permitted for appeal cannot be less than sixty days. Note, however, that subsequent new requests for a determination of ADA paratransit eligibility will need to be considered at any time, since the functional impairments associated with an individual's disability may be expected to change over time.

The USDOT regulations establish standards for the appeal of a determination of non-eligibility. An individual has the right to an appeal before a person and office other than those who made the initial determination. The individual making the appeal has the right to be heard in person and to have necessary support, such as a sign language interpreter.

No service need be provided while the appeal is heard. If, however, an appeal has not been decided within thirty days,

presumptive eligibility applies until a final decision is reached.

Note that there are certain circumstances under which an individual, otherwise

eligible for ADA paratransit, may be denied those services. A person whose behavior threatens or has threatened the safety of paratransit personnel or other customers, may be denied the service. Additionally, persons who demonstrate a consistent pattern of missing scheduled paratransit trips, "no-shows", may lose their eligibility for a reasonable, specific period of time. Such temporary suspensions of eligibility, as well as permanent loss of eligibility because of violent or threatening behavior, may be appealed through the administrative procedure set up under this regulation. In the case of temporary suspension of "no-shows", suspension of service must not begin until the appeals process is complete.

Because ADA paratransit eligibility is established as a civil right, there is for the transit provider a special obligation to ensure that "due process" is observed.

The determination made upon appeal will, like the initial determination, need to be in writing (and in an appropriate medium, if requested) and must state the basis for the determination. A transit provider could, theoretically, establish an additional level of appeal, but this is not required or recommended. In any case, the denial of ADA paratransit eligibility can become the subject of a civil rights complaint and ultimately be reviewed by the courts. Full documentation of the process is essential. There is, however, no requirement for transcribing any part of the determination process, nor is this recommended.

Note that throughout the appeals process, as with the initial determination of eligibility, an individual may be represented by an individual of her choice. This representative may or may not be a lawyer and might appropriately include an independent living or rehabilitation counselor, or other such professional.

Section 6.

Presumptive and Reciprocal Eligibility

The right to paratransit under the ADA cannot be restricted by any tests other than the ability to utilize available fixed route services. Residency in a service area or political jurisdiction of the

transit system is not required for ADA eligibility. There are two circumstances in which a transit provider will need to deal with the requests for paratransit service from individual's living outside of the local community.

An "out-of-town" individual seeking to utilize the ADA paratransit service may be certified by another transit system. When a specific trip request is made, the scheduler may ask if the person making the request has such certification. If so, that certification must be honored by the

host jurisdiction. The limitations placed upon a certification of ADA eligibility may be observed. For example, if the certification indicates that the individual can utilize accessible vehicles, and the host system runs accessible vehicles for the trip requested, no paratransit need be provided on that basis.

Eligibility must be presumed and reciprocally provided if an individual presents certification from another system. If an out-of-town individual does not have such certification, but makes a claim of eligibility in a host system, that claim must be honored on a presumption of eligibility. In such cases, transit providers may require proof that the individual is, in fact, not a resident of the local transit district and, if the request for service is based upon a hidden impairment (e.g., a cardiac condition), medical documentation may be required. Such a presumption of eligibility, for a period of twenty one days, is required by the regulations. Service must be provided on the same basis as for locally certified individuals.

When an out-of-town customer first makes a request to use paratransit on the basis of presumptive or reciprocal eligibility, it is suggested that she be advised of the provider's eligibility policy and process.

A system may, however, require such an individual to make a request for ADA paratransit eligibility certification through that system if the individual plans to use the system for more

than twenty-one days. Thus, for example, if an individual regularly resides in a community where there is no transit system, but vacations for several months in a community with transit, that individual is entitled under the ADA to appropriate paratransit services in the vacation community. The host community may, however, require that this individual obtain local certification if she plans to use the system beyond twenty-one days. During the period while the certification is being processed, up to the twenty-one day limit, the individual will be entitled to

presumptive eligibility. When an out-of-town customer first makes a request to use paratransit on the basis of presumptive or reciprocal eligibility, it is suggested that she be advised of the provider's eligibility policy and process. Local providers will want to determine how to deal with the situation of the occasional visitor who may, over time, accumulate twenty-one days of paratransit use. Such a policy should be designed to reduce the possibility that a visiting paratransit customer will suddenly and unexpectedly find that the service is no longer available. For example, an occasional visitor to a city might be advised that if she expects to utilize the paratransit service more than twenty-one days in a one year period, she should apply for local certification of her eligibility.

Privacy Regarding Medical Information

The ***medical information*** that may be gathered as part of the ADA para- transit eligibility determination process should not be shared with any other party. Transit providers may, however, share information regarding the ***functional ability*** of an individual to utilize transit services with another transit system if this is required to determine eligibility in that system. The staff of the transit provider, as well as any outside agencies that may be utilized to perform eligibility reviews, should be carefully instructed to respect the privacy of persons seeking ADA paratransit eligibility certification.

The staff of the transit provider, as well as any outside agencies that may be utilized to perform eligibility reviews, should be carefully instructed to respect the privacy of persons seeking ADA paratransit eligibility certification.

Section 7.

Guests Traveling with an Eligible Customer

USDOT regulations guarantee that an eligible individual may travel with at least one guest. A person employed by the ADA eligible customer as a personal care attendant is not considered a guest. The personal care attendant may be a friend or family member or may be a paid employee of the eligible person. In a very real sense, a personal care attendant is a "mobility aid" to the eligible person, similar to a wheelchair or cane. Transit providers may want to require that eligible individuals indicate the need for a personal care attendant at the time of eligibility certification.

The fare for a guest will be the same as for the ADA eligible customer. There is no charge for a required personal care attendant.

Additional guests may accompany the customer with ADA eligibility on a space-available basis. Confirmed reservations for such additional traveling companions would

properly be made only after the time period provided for advance booking. Thus, confirmed reservations made for additional guests would be restricted to the day of the trip. Providers are encouraged to allow for advanced booking requests for such guest trips, in order to allow for the reasonable planning needs of the ADA eligible customer and their companions.

5

The Service Criteria and Required Operating Standards



When your complementary paratransit service plan is fully implemented, the level of service provided to persons determined “ADA Paratransit Eligible” must be **comparable** to service provided on the fixed route system. Six service criteria, which define the level of paratransit service that is considered comparable, are included in the regulations. The regulations also set minimum standards for certain operating policies and procedures such as driver training, equipment maintenance, and passenger assistance. Vehicle and equipment standards also must be met. This chapter explains each of the service criteria and operating standards.

Paratransit and fixed route are, by nature, very different services. Certain aspects of each operation, such as the area served, the fares charged, the trip purposes accommodated, and the days and hours of operation, can be closely equated. Other measures of service, such as response time and capacity issues must be made comparable giving consideration to the characteristics unique to each operation. The differences in each type of operation are acknowledged in the legislative history. House Report 101-485 states that:

“Since the operation of fixed route and paratransit service differ so markedly, levels of service must only be comparable - not identical”. (H. Rep. No. 485, 101st Cong., 2d sess., pt. 1 at 28).

As discussed in Chapter 3, you are not prohibited from providing service that

exceeds any one of the service criteria. However, if additional service is provided and an undue financial burden waiver is requested, only those costs associated with the provision of the required service can be included in the request.

The regulations also do not prohibit you from providing a different level of service to non-ADA eligible users of your paratransit system. For example, you may be required to operate complementary paratransit service six days a week from 6 a.m. until 10 p.m. to provide ADA paratransit eligible persons a level of service comparable to fixed route service in your area. Beyond this required service, you can provide, for example, medical and shopping transportation to older persons and operate this program only Monday through Friday from 9 a.m. to 5 p.m. This additional program also can require longer advance notice than your ADA service and have capacity constraints such as waiting lists or trip limits.

Section 1.

The Six Service Criteria

Service Area

Complementary paratransit service must be provided to all origins and destinations within service areas defined by the regulations. Service areas are defined differently for fixed route bus systems and rail systems. As noted in Chapter 4, ADA paratransit eligible individuals do not need to live in these areas to be eligible for service as long as they make trips within the area.

For **bus systems**, the basic service area is a corridor centered on the fixed route and extending 3/4 of a mile to either side of the route. Corridors can be extended up to 1 1/2 miles on either side of the fixed route. The exact width should be determined through the public participation process. The service area at the ends of each route would be a semicircle connecting each side of the corridor. Figure

5.1 illustrates how basic service corridors are to be developed.

For more extensive fixed route systems, the regulations define a "core service area" and establish slightly different service

area requirements. A core service area is defined in §37.131 as:

"...that area in which corridors with a width of three-fourths of a mile on each side of a fixed route merge together such that, with few and small exceptions, origins and destinations within the area would be served."

For bus systems, the basic service area is a corridor centered on the fixed route and extending 3/4 of a mile to either side of the route.

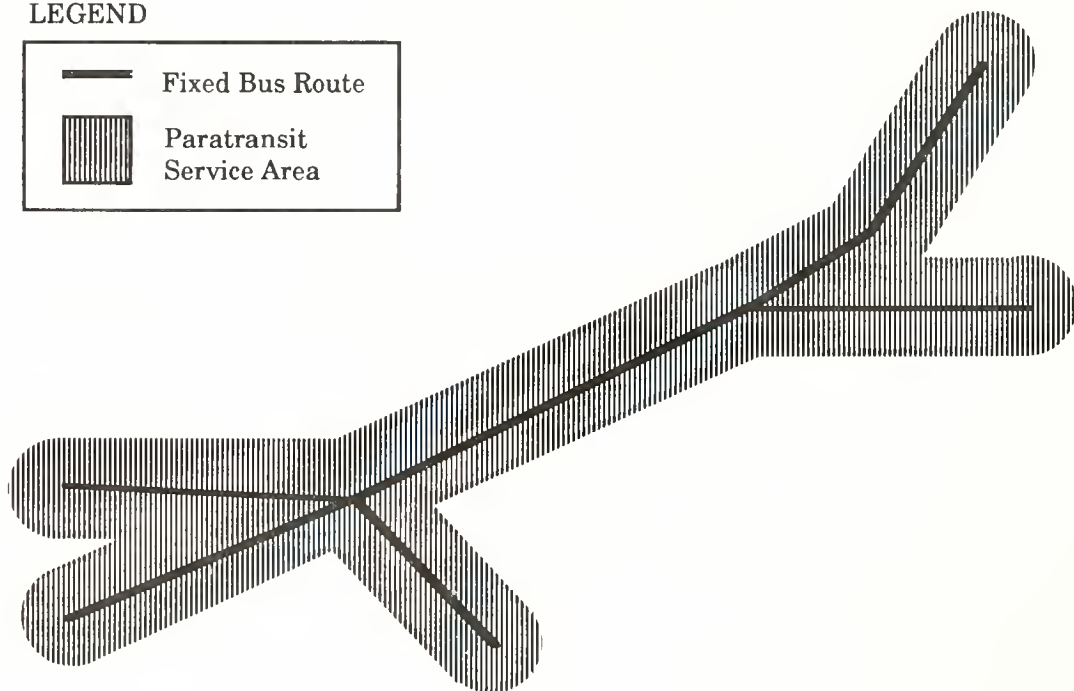
Paratransit service must be provided to all origins and destinations in core service areas. This includes any small areas not within the corridors but

surrounded by corridors.

Figure 5.1

Illustration of Bus Route Service Corridors

LEGEND



Outside the core service area, corridors can extend up to one and one-half miles on each side of the fixed route (i.e. up to 3 miles in total width). The exact width of corridors outside the core area should be established as part of the planning process. They should be wider than the minimum if you determine that users of your fixed route service typically travel more than $\frac{3}{4}$ of a mile to get to bus stops.

Figure 5.2 illustrates a complementary paratransit service area for a fixed route bus system that includes a core service area.

For ***rapid rail and light rail systems***, service area is defined as a series of circles, $\frac{3}{4}$ of a mile in radius, centered on each station. At end stations and stations in outlying areas, the service area around each station can have a radius of up to one and one-half miles. Key stations are not to be treated differently unless they are an end station or are in an outlying area. As with fixed route bus systems, the exact size of the area at these stations should be determined as part of the planning process.

Figure 5.2

**Illustration of Paratransit Corridors Including
a Core Service Area**

Legend

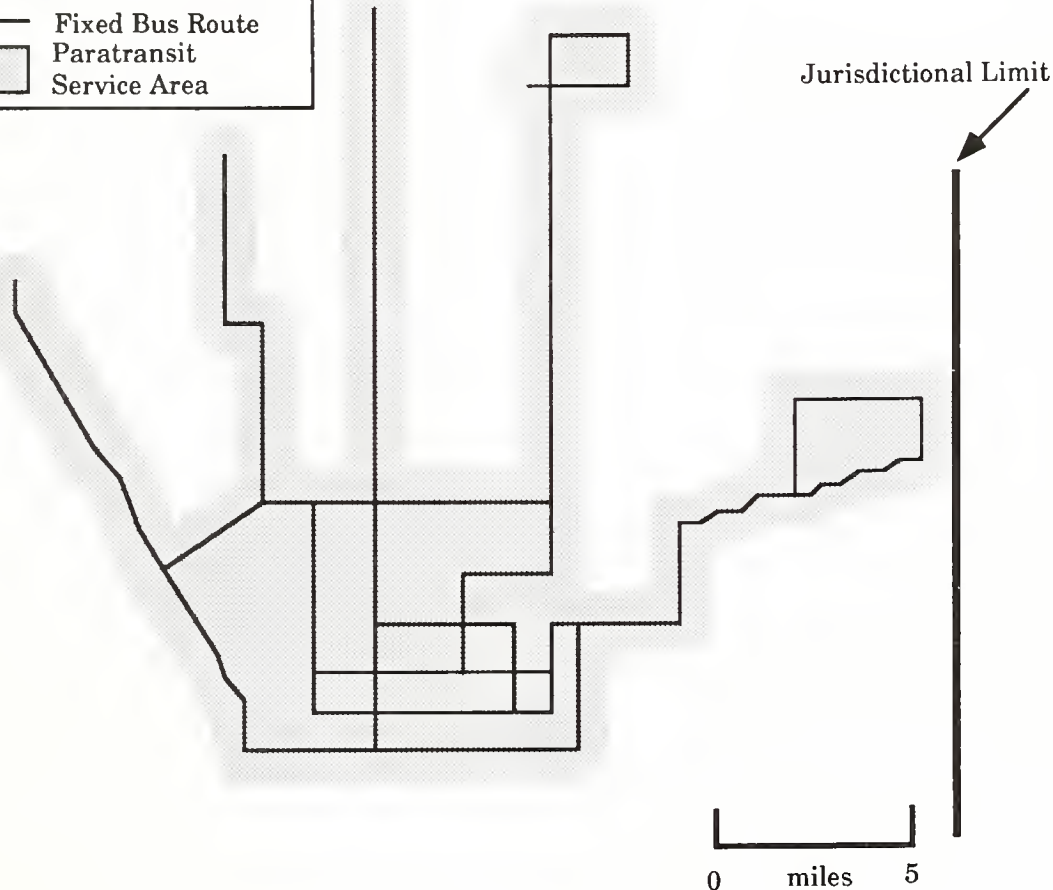


Figure 5.3

**Illustration of Paratransit Service Area
for a Rapid Rail or Light Rail System**

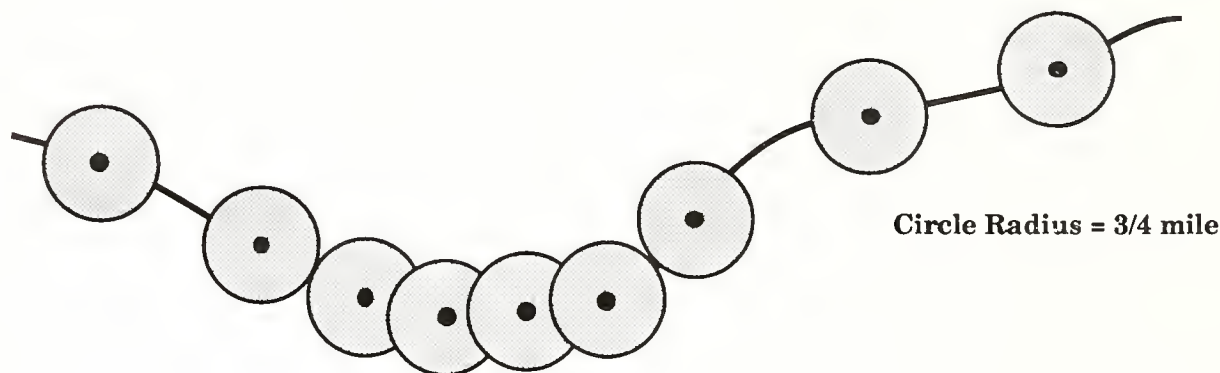


Figure 5.3 illustrates a service area for a rail system. Complementary paratransit service must be provided from any point in one circle to any point in any other circle. Service is not required within the same circle since such a trip would not require use of the rail service. Service also is not required to or from any areas that are not within one of the circles.

In areas where bus and rail service areas overlap, the existence of an accessible bus system does not necessarily relieve the rail operator from responsibility for the provision of complementary paratransit service. Rail service is often quicker and more direct. A similar trip on a bus system can sometimes require one or more transfers. Rail operators can only refer ADA paratransit eligible individuals to accessible bus service if the trip by bus is comparable.

These minimum requirements do not prohibit you from providing service in a

broader area. Many paratransit systems set up in response to the Section 504 regulations offer area-wide service. While you can establish a larger service area, the costs associated with providing this additional service cannot be included in the calculation of undue financial burden should you apply for a waiver.

As noted in Chapter 2, complementary paratransit service does not have to be provided along fixed routes that provide only commuter service - such as commuter bus routes or commuter rail lines.

You also are **not** required to provide service in areas where you do not have legal authority to operate. For example, if one of your bus routes runs within 1/4 mile of the county border and you are legally prohibited from operating outside your county, you are not required to provide service into the next county.

This exception does not apply to political boundaries where there is no legal restriction. If operating within these boundaries is strictly a matter of local policy, such policies must be revised.

If jurisdictional boundaries limit the provision of paratransit throughout the service area, efforts must be made to resolve the problem. You should work with state and local authorities to have your operating rights amended. Agreements with bordering

jurisdictions also should be pursued to prevent these boundaries from limiting travel by persons with disabilities. Whenever possible, establish operating agreements to facilitate

travel between regions. Such agreements will not only make travel easier for riders but will improve the efficiency of paratransit operations.

In many places, the fixed route service areas of public entities overlap. In these cases, each entity is responsible for making sure that complementary paratransit service is available, but separate paratransit services are not required. To the extent possible, coordinate the provision of paratransit service. One agency can contract with the other, or a coordinated brokerage system can be jointly established.

If you collaborate with other entities to provide coordinated service in overlapping or contiguous areas, the level of service provided by the coordinated system must equal the level of service that would exist if separate services were to be operated. For example, if your fixed route service operates on weekends and the other entity's does not, the paratransit service provided in the area of overlap between your systems must operate on weekends. The same approach is to be used for each of the required service criteria described in this chapter. Financial mechanisms for

prorating costs can be established to account for differences between systems.

Response Time

Response time is defined as the elapsed time between a request for service and the provision of service, where the provision of service is measured as the time the vehicle arrives to pick-up the passenger. The regulations require that "**next day service**" be provided. This means that you must accommodate requests for service for

a particular day made anytime during the preceding day.

Requests for service must be taken during those hours that your administrative offices are open (Monday -

Friday from 8-4 or 9-5 for example).

Reservations do not have to be accepted during all of the hours that the system is in operation if service begins very early in the morning or runs late into the evening. You also must arrange to accept reservations on days that the administrative offices are closed if service is provided on the following day. For example, if service is provided seven days a week, but the administrative offices are only open Monday - Friday, provision must be made to accept requests on Saturday for Sunday service and on Sunday for Monday service. Reservation service on these days must be available during hours comparable to normal office hours. The use of answering machines, answering services, or other arrangements is permitted to meet this requirement as long as all scheduling needs of users can be met.

The regulations also require that riders be permitted to place trip requests up to 14 days in advance. This requirement does not preclude you from accepting reservations even further in advance. For certain types of trips, such as subscription trips for work, or trips that have an appointment time known well in advance,

The regulations require that "next day service" be provided. This means that you must accommodate requests for service for a particular day made anytime during the preceding day.

it may be advantageous to do this. The amount of last-minute scheduling can be reduced and riders can conveniently make reservations when appointments become known rather than having to remember to call within a certain timeframe. You should be aware, however, that until you reach a point where capacity constraints are eliminated or are minimal, requests made well in advance can limit your ability to meet needs that are more immediate.

Pick up times also can be negotiated with riders to make scheduling more efficient. Changes in requested departure times of up to one hour can be required. Changes beyond an hour must be agreed to by the rider. For example, suppose a rider requests an 8:30 a.m. pick up to be at work at 9:00 a.m. and a 5:00 p.m. pick up to return home. You can negotiate a morning pick up between 7:30 and 8:30 a.m. In the afternoon, a pick up between 5:00 and 6:00 p.m. can be negotiated if this would assist in scheduling.

Negotiation of pick up times should consider the rider's schedule and desired arrival and departure times. In the above example, suggesting a 4:00 p.m. pick up knowing that the person works until 5:00 p.m. would not be in keeping with the concept of comparable service.

While not required, the regulations permit and encourage the type of "real time" scheduling used in the taxi industry. The flexibility that users have with this method of operation is much more conducive to the many unscheduled travel needs that are a large part of daily life. Look carefully at this type of scheduling to see if it can work in your area for all or part of your paratransit program. Try scheduling return trips using this method or conduct a limited demonstration during

weekend hours to determine impacts on productivity, demand, and cost.

Fares

Fares charged for complementary paratransit service can be no more than twice the fare for a comparable trip made by a person without a disability on the fixed route system. The comparable fixed route fare is defined as the **full** fare. It is not based on the discounted fare available to persons with disabilities and elderly persons or on any other discounts which may be offered (such as student discounts).

If the fares on the fixed route system vary by zone or length, or by time of day or day of the week, complementary paratransit service

fares can change correspondingly. Similarly, if the same trip on the fixed route system involves a transfer to another line or mode and a "transfer fee," that trip on the paratransit system can include this additional amount. Premium fixed route fares also can be considered.

If it is possible to make the same trip on more than one fixed route mode, the fare for paratransit service is to be set using the mode that would most likely be used by the individual. In determining which fixed route mode would apply, service factors such as schedule availability, trip time, convenience, and transfers must be considered.

Fares cannot vary based on a rider's disability or the mobility aid used. Contracts with providers can specify different rates of reimbursement for different levels of assistance, but the fare charged must not vary from rider to rider.

Fares paid by companion(s) are to be calculated in the same way. Personal care attendants (PCAs) traveling with ADA paratransit eligible riders cannot be

charged. As discussed in Chapter 4, PCAs provide assistance to the rider and are not considered "companions".

Following are examples that illustrate the calculation of paratransit fares:

Example 1: Suppose that the comparable trip on fixed route involves travel on two bus routes and that there is no transfer policy. If the full fare for each bus is \$1.00, the total fare for this trip on the fixed route bus by a person without a disability is \$2.00. The maximum complementary paratransit fare, therefore, is \$4.00.

Example 2: Suppose that the comparable trip on fixed route involves the use of two rapid transit lines. The subway fare is \$1.00 and there is a transfer fee of \$.50.

In this case, the total fare for this trip by a person without a disability is \$1.50 and the maximum allowable complementary paratransit fare is \$3.00.

Example 3: Suppose that rapid rail service is provided from a suburban community to the urban center and that the fare is \$2.00. Bus service is also available for \$1.00 but a trip by bus involves two transfers and takes much longer. Few people use the bus service to travel to the urban center. The complementary paratransit fare can be up to \$4.00 since the likely fixed route mode that would otherwise be used is the rail system.

Fares can vary among different types of paratransit service as long as the highest fare is no more than twice the fixed route fare. For example, if you sell vouchers for immediate response taxi service as a supplement to your "next day" shared-ride van service, vouchers can be priced higher. The shared-ride van fare could be equal to the fixed route fare and a taxi voucher

could be twice the fixed route fare.

The regulations do not preclude you from charging higher fares for paratransit service provided to persons who are not ADA paratransit eligible. You also can develop full-cost rates or other rates of reimbursement for transporting human service agency clients that are higher than complementary paratransit service fares. Informal referrals by human service agency staff should not, however, be treated the same as contract services. For example, a request for service might be made by an agency on behalf of an eligible rider with a cognitive or communication disability. In this case, the complementary paratransit service fare must be used.

Trip Purposes

Requests for all types of trip purposes must be accepted and handled on an equal basis... Complementary paratransit service must be offered during the same days and hours that the fixed route system is in operation.

Requests for all types of trip purposes must be accepted and handled on an equal basis. Prioritizing trips - meeting demand for certain types of trips before accommodating others - is not

permitted.

While this criteria requires different trip purposes to be handled equally, it does not prohibit you from offering "subscription" service. Special provisions for subscription service are discussed in Section 2 of this chapter.

Hours and Days of Service

Complementary paratransit service must be offered during the same days and hours that the fixed route system is in operation. This includes times when the fixed route system is on a limited schedule, such as Sundays, holidays, or late evening or early morning hours.

If more than one type of fixed route service is provided in a given area, the paratransit service must match the days and hours of the more extensive service. In many cities, for example, the subway or

light rail system operates longer hours than the fixed route bus service. Paratransit service must match these longer hours in the area served by the subway or light rail system. It can operate fewer hours in outlying areas which have only fixed route bus service.

Working with other providers, particularly private taxi and van operators, can help you provide this service.

- Options for brokering portions of your service or operating a user-side subsidy program to meet certain demands are discussed in Chapter 6.

Capacity Constraints

This provision of the regulations prohibits public entities from limiting the amount of complementary paratransit service

provided to ADA paratransit eligible persons. Because of the basic differences between the way that fixed route and paratransit services are provided, it is perhaps the most difficult criterion to understand and “equate”.

Actions and situations that are considered to cause limitations, or constraints, include:

- Policies that restrict, or “cap”, the number of trips provided to an individual;
- Maintaining waiting lists for (non-subscription) trip requests that cannot be accommodated. This includes having a “stand-by” list and either calling individuals on the list when there are cancellations or asking riders to call back on the day of service to see if there were cancellations;
- Operational patterns or practices that significantly limit the availability of service. This includes operating a system in such a way that there are a

substantial numbers of: ***untimely pickups; trip denials; missed trips; or, excessively long trips.***

To determine whether or not your system is capacity constrained under the third category, look for ***patterns and practices*** rather than individual, one-time incidents. You are not responsible for operational problems caused by circumstances beyond your control. Trips provided late or missed because of unanticipated weather or traffic problems would not, for example, constitute a pattern or practice. Repeated incidents caused by poor maintenance or excessively tight scheduling would, however, trigger this provision.

Operational problems also must be ***substantial***. In any paratransit service, given the complexity of the operation, there are trips that are missed and times when vehicles break down or run late, even with the best management. Occasional late trips or trips that are only late by a small amount of

time would not be counted under this provision. Denying a limited number of trips due to an ***unanticipated*** rise in demand also would be acceptable.

Even after complementary paratransit service has been fully implemented, you may face end of the year budget realities which will lead to capacity constraints that you had not anticipated. Estimates of demand made at the beginning of the fiscal year may be below actual ridership. Trip denial rates may have to increase at year’s end if additional funding cannot be provided. In such cases, be prepared to show that a “good faith effort” was made in the original estimation of demand and in seeking additional funding. Also notify the agency to whom you submitted your ADA paratransit plan (your UMTA regional office or state administering agency).

In order to determine whether capacity constraints exist, you need to define what constitutes a "missed" trip, what "on-time" performance means, when a trip has been "denied", and when travel time is too long. For example, is service "on-time" if the pick-up and drop-off are within fifteen minutes of the scheduled time? half an hour? At what point in time does a trip go from being late to "missed"? And, if travel time is twice that of a fixed route trip, is it too long?

The regulations permit pickups to be scheduled up to an hour before or after the requested time. Offering a trip beyond this time should therefore be considered a "denial" of service if the proposed pickup time is unacceptable to the individual.

Other definitions should be developed with the input of persons with disabilities. Table 5.1 offers ways to measure each of these "level of service indicators". It also provides suggested standards that would be comparable to similar service measures on a fixed route system.

Section 2.

Other Equipment and Operating Requirements

In addition to the six service criteria listed above, there are several operating and equipment standards included in the USDOT regulations. Undue financial burden waiver provisions do not apply to these requirements. Compliance is required without exception. Each standard is described below.

No-Show Policies

Section 37.125(h) of the regulations allows the provision of complementary paratransit service to be suspended, for a reasonable period of time, in cases where an individual consistently misses scheduled appointments. This provision does not apply to trips that are missed for reasons that are beyond the individual's control. Scheduling problems, late pickups, and other operational problems must be considered beyond the rider's control.

Table 5.1

Possible Paratransit Capacity Constraint Indicators

Level of Service Indicator	Measure	Standard
Travel time	Time between pick-up and drop-off	Compare to fixed route travel time (same, twice, etc.)
Missed trips	Percent of one-way trips canceled by the provider plus trips provided too late for rider to meet appointment.	Compare to percent of fixed route runs canceled.
Trip denials	Number of one-way trips unable to be scheduled.	Compare to "unmet" fixed route need; potential trips on routes that could be justified by projected fare recovery but are unfunded.
On-time performance	Percent of trips provided within a given window of time (± 15 minutes, ± 30 minutes, etc.)	Compare to fixed route schedule adherence, or define the "window" as a percent of fixed route headway (eg. half the headway).

You also should differentiate between “no-shows” and canceled trips. If notice is given by the rider far enough in advance to allow you to re-route the vehicle, the trip should be recorded as being canceled.

Persons with disabilities should have input into the development of your no-show policy. Their experience as users of your system will be important in addressing details such as:

- the number and frequency of no-shows that justify a suspension of service;
- the amount of advance notice that riders must give if they want to cancel a trip; and,
- the length of time for which service can be suspended.

Other incentives and disincentives also should be considered. For example, charge individuals (or sponsoring agencies) the amount of the fare or marginal cost of service. Contact individuals if they begin to miss trip appointments to determine if there is a service problem that needs to be corrected. Be sure they understand the no-show policy. Regularly notify all riders through a newsletter or flyer of the importance of canceling trips they do not intend to take.

Before you can suspend service, the regulations require that you notify the individual, in writing, of your intent to suspend service. This notification must cite, in detail, the basis for the proposed suspension and the exact sanctions that will be imposed. Individuals also must be given an opportunity to be heard and to present information and arguments. The availability of this appeal should be explained in the initial notice that is given. The same appeal process used to review eligibility determination denial should be used.

☛ The appeal process is described in Section 5 of Chapter 4 of this handbook.

Types of service

The appropriate use of “on-call bus service” and “paratransit feeder service” is addressed by §37.129 of the regulations. On-call bus service, also known as Call-A-Lift-Bus service, allows a rider to make an advance reservation for an accessible fixed route bus.

☛ Section 3 of Chapter 6 describes this type of service in more detail.

Paratransit feeder service refers to providing an individual with paratransit for only that portion of their trip which they cannot manage.

Paratransit service is to be provided for the entire trip (*i.e.* origin-to-destination) in all but the following cases:

- If an individual is able to use an accessible bus, but the fixed route on which they want to travel is not accessible, on-call bus service may be provided;
- If an individual is able to use an accessible bus, but the closest fixed route is not accessible, feeder service may be provided to another accessible fixed route;
- If a person is not able to get to a station or stop because of a “specific impairment-related condition” (eligibility category 3), feeder service may be provided.

On-call bus service must meet all of the paratransit service criteria, except for the criterion concerning fares. On-call bus service fare must be equal to fixed route bus fares (including discounts).

When feeder service is provided, the rider cannot be double charged for the trip. The total fare cannot exceed the equivalent origin-to-destination paratransit fare. Feeder service can be used as a connector to either end of a fixed route trip. Total travel time, operational feasibility, and inconvenience to the rider should be considered if feeder service is employed. For some trips, it may be more convenient

and less expensive to simply provide origin-to-destination paratransit service. These factors are particularly important if feeder service at both ends of the trip is being considered.

Subscription Service

Subscription service is the practice of providing repetitive trips over an extended period of time without requiring that individuals call to request each trip.

Typically, subscription service is provided for trips to work, work training, education, specialized medical care, or other regular travel needs.

Subscription service has a number of benefits. To the provider, it is a way to more efficiently and appropriately handle repeat trips. To users, it provides the reliability

of service they need to be able to make long term commitments - particularly if capacity constraints exist. An inability to request subscription service can be a substantial barrier to employment, continuing education, and job training.

Until capacity constraints are removed, allowing unlimited subscription service can restrict the number of single trip requests that you can accommodate. For this reason, the regulations place a limit on the provision of subscription service.

Section 37.133(b) states that:

“Subscription service may not absorb more than fifty percent of the number of trips available at a given time of day, unless there is excess non-subscription capacity.”

This limitation applies to all times of the service day. Subscription service must not exceed half of the trips provided at **any time**, unless all non-subscription requests can be met. In deciding what level of subscription service to provide, you can consider past trip patterns to determine your total capacity and the expected level of non-subscription service requests.

Adjustments are not required on a daily basis. The explanatory section of the regulations offer the following example regarding subscription service:

If, at 8 a.m., a system can provide 400 trips, no more than 200 of these can be subscription trips. If over a long enough period of time to establish a pattern, there were only 150 non-subscription trips requested at 8 a.m., you can begin to provide 250 subscription trips at that time. If non-subscription demand increases over a period of time, such that 50

additional trips are needed to satisfy this demand, and overall capacity has not increased, subscription service must be reduced by 50 trips.

Requests for subscription service can be limited to specific trip purposes. Waiting lists, caps on the number of trips, and other forms of capacity constraints are permissible for subscription service.

Services provided outside the scope of the ADA are not subject to this 50% limit. Transportation provided to human service agency clients as part of a coordinated transportation program, for example, would not have to be restricted if this program was supplemental to the ADA paratransit service.

As discussed in the “Response Time” section of this chapter, adjustments in actual trip time can be negotiated with riders. This is one way to handle capacity problems during peak subscription hours. If acceptable to the rider, non-subscription trips can be moved to times when there is excess capacity.

Because subscription service is not required by the regulations, certain restrictions on its use may be established. Requests for subscription service can be limited to specific trip purposes. Waiting lists, caps on the number of trips, and other forms of capacity constraints are permissible for subscription service.

Equipment Specifications

Part 38 of the USDOT regulations incorporates the “Americans with Disabilities Act (ADA) Accessibility Specifications for Transportation Vehicles” developed by the Architectural and Transportation Barriers Compliance Board (ATBCB). Subpart B of these specifications establishes standards for vans and buses.

☛ Appendix A of this handbook includes a copy of the standards for vans and buses. Section 5 of Chapter 9 also offers suggestions for purchasing equipment in compliance with the regulations.

Maintenance

Another important aspect of operation is the proper maintenance of access-related equipment. The ADA requires that vehicles be accessible to **and usable by** individuals with disabilities. Two sections of the regulations address this issue. Section 37.161 requires that all access-related features, including lifts, ramps, securement systems, signage, and communications systems, be maintained in operating condition. This equipment must be repaired promptly if it is damaged or breaks down.

Section 37.163 requires regular and frequent maintenance checks of lifts. Drivers are required to report lift failures as soon possible. Every effort must be made to repair lifts before the next day of service. If the lift cannot be repaired before the next day of service, the vehicle can be placed back in operation only if a spare is unavailable. Vehicles with inoperable lifts can be kept in service for no more than three days (if the service area population is more than 50,000) and five days (if the service area population is 50,000 or less).

Have drivers test lifts and inspect securement systems and other access-related features as part of their daily “circle check”. Include lift and securement systems in your regular vehicle maintenance program. Pay particular attention to any service and repair information provided by the manufacturer. This information typically specifies key parts that need to be regularly inspected for wear.

Be sure that you or your maintenance contractor have an adequate supply of spare parts readily available. Also maintain an adequate ratio of spare vehicles within your total fleet. One spare for every five or six vehicles is typical, but may vary depending on the age or repair

All “common wheelchairs” and their users must be transported. A common wheelchair is a wheelchair that does not exceed 30 inches in width and 48 inches in length measured two inches above the ground, and does not weigh more than 600 pounds when occupied.

record of equipment you have purchased. Factor vehicle “downtime” into your calculation of the proper percentage of lift-equipped vehicles needed in your fleet to ensure a comparable level of service to those persons who require the use of a lift.

Lift and Securement Use

Section 37.165 establishes the policy regarding the use of lifts and securement devices, accommodation of mobility devices, transfers, and driver assistance. Subsection (b) requires that all “common wheelchairs” and their users must be transported. A common wheelchair is a wheelchair that does not exceed 30 inches in width and 48 inches in length measured two inches above the ground, and does not weigh more than 600 pounds when occupied. Wheelchairs are defined to include both three-wheeled and four-wheeled mobility aids. Three-wheeled “scooters” and other non-traditional designs that fit within these standards must be transported.

Most mobility devices fit within these standards. There are some, however, such

as very large or heavy wheelchairs or stretchers, that exceed the weight limit and dimensions set forth in the guidelines. In these cases, the regulations allow you to refuse service regardless of other qualifying functional limitations that the user may have.

Subpart (c) requires that wheelchairs be secured during transport. Use of the securement system can be required as a condition of receiving service. If your vehicle has a securement system which meets the new standards of Part 38 of the regulations, wheelchair users must be transported in a forward-facing or rear-facing position. Wheelchair-users can be transported facing the aisle only on vehicles that are not yet equipped in compliance with the standards in Part 38.

Complementary paratransit service cannot be denied on the grounds that a mobility device cannot be secured to your satisfaction. You should make every effort to obtain state-of-the-art securement systems that accommodate all types of wheelchairs.

You also can contract with area providers who have this type of equipment.

When transporting users of three-wheeled wheelchairs or other mobility devices that pose securement problems, you can **request** that the user transfer to a vehicle seat. The regulations do not, however, allow you to require such a transfer. For some users of these devices, transfers pose a safety risk. Vehicle seats also are not always designed to provide the specific support that an individual may need. You can explain to riders your reasons for requesting a transfer but you must allow them to make the final decision on whether a transfer is appropriate given their particular disability. The proper techniques for assisted transfers also should be part of the training provided to

your drivers.

Finally, the regulations require that a person who cannot enter a vehicle using the stairs but who does not use a wheelchair must be allowed to enter the vehicle using the lift. Equipment specifications included in the regulations require handrails on both sides of the lift for this reason. Also consider keeping inexpensive manual wheelchairs on your vehicles. This will give the rider the option to either stand on the lift or ride in the wheelchair provided.

Accommodating Other Mobility Aids and Life Support Equipment

Two additional requirements concerning mobility aids and life support equipment are contained in §37.167. First, your

When transporting users of three-wheeled wheelchairs or other mobility devices that pose securement problems, you can request that the user transfer to a vehicle seat. The regulations do not, however, allow you to require such a transfer.

operating policies must permit ADA paratransit eligible riders to travel with service animals trained to assist them. Service animals include guide dogs used by persons with vision or hearing impairments, and dogs and other

animals that provide aid to persons with mobility impairments.

Second, persons must be permitted to travel with respirators, portable oxygen, and other life support equipment. Travel with this equipment can only be denied if it would violate rules concerning the transportation of hazardous materials (49 CFR Parts 100-199).

In general, the transport of common types of portable life support equipment is not prohibited. Cylinders of oxygen used by passengers for health reasons, for example, are not subject to the Hazardous Materials Regulations.

☛ For guidance on other types of equipment, contact the USDOT's Office of Hazardous Materials Regulation at (202) 366-4479.

Attendant Policies/Refusing Service

As noted in Section 7 of Chapter 4, personal care attendants (PCAs) must be permitted to accompany ADA eligible riders and are not considered companions. The regulations permit you to require individuals to indicate the need to travel with a PCA when they request eligibility certification.

You cannot require that an individual travel with an attendant. If you feel that a rider would benefit from the aid of an attendant, this can be suggested.

Service cannot be refused, however, if the person decides to continue to travel independently.

Service can only be refused if a rider engages in "violent, seriously disruptive, or illegal conduct" [§37.5 (h)]. Seriously disruptive conduct does not include behavior or appearance that only offends, annoys, or inconveniences other riders or employees. In keeping with the concept of comparability, your fixed route and paratransit policies in this area should be consistent.

Communications and Public Information

Requirements for communications and information are contained in §37.167(f). Adequate telephone capacity, both voice and TDD, must be provided to enable users to schedule service and obtain information. Phone lines that are constantly busy or require users to hold for long periods of time could be construed as a limitation on service and a form of capacity constraint. All material made available to applicants and users of your paratransit service, including general information brochures, application forms, rider handbooks, and occasional bulletins, must be available in accessible formats

such as large print, tape, and braille.

Accessible information must be available ***upon request***. Work with your consumer advisory committee or local agencies to determine the formats that will be most helpful. Try to anticipate the demand for different types of material. Keep a regular

supply of frequently used public information available in these formats. Accommodate requests for other information or formats as soon as possible.

This requirement also applies to marketing and public information programs. Utilize closed captioning when

advertising on television. Radio advertising should be used to reach individuals who are vision impaired.

Reservation offices and administrative office should be equipped with a telecommunication display device (TDD) to enable persons with hearing or speech impairments to request trips, cancel or update requests, or obtain other information or assistance. Be sure that any alternative scheduling arrangements you make to meet the "next day" response time criterion can be used by persons with hearing or speech impairments.

☛ Independent Living Centers (ILCs), associations for persons with visual impairments, and vocational rehabilitation offices can help you get information prepared in braille. Braille printers and computer software that converts wordprocessing files to braille symbols are available at a reasonable cost.

☛ ILCs and associations for persons with hearing impairments are a good source of information about TDDs and can help train your staff in their proper use. Companies that sell hearing aids also often sell TDD equipment.

Appendix E of this handbook contains information about braille software and printers and tips for making voice and print material accessible. Information about ILCs and associations for the vision and hearing impaired in your area can be obtained by calling the national organizations listed in Appendix K.

Training

Section 37.173 of the regulations establishes a training requirement for all ADA related transportation services, including paratransit and fixed route services provided by public as well as private entities. It states that:

“Each public or private entity which operates a fixed route or demand responsive system shall ensure that personnel are trained to proficiency, as appropriate to their duties, so that they operate vehicles and equipment safely and properly and treat individuals with disabilities who use the service in a respectful and courteous way, with appropriate attention to the differences among individuals with disabilities.”

Adding lifts and other equipment to vehicles is only the first step in providing transportation service that is truly accessible. A well-trained workforce is essential to ensure that this equipment is used correctly and that a good level of service is provided.

Adding lifts and other equipment to vehicles is only the first step in providing transportation service that is truly accessible. A well-trained workforce is essential to ensure that this equipment is used correctly and that a good level of service is provided.

As the regulatory language indicates, training is to be appropriate to the duties of each employee. For example, drivers, dispatchers, and administrative personnel will need more extensive instruction in understanding different types of disabilities than mechanics.

Training is to be provided “to proficiency”.

This suggests that your training programs must be comprehensive and that you must establish methods of testing each employee’s understanding of the material to ensure that they are fully qualified to serve passengers

with disabilities.

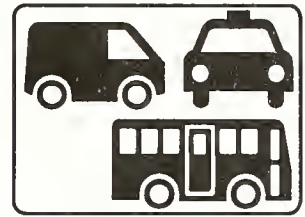
It is strongly recommended that you involve persons with disabilities and disability organizations in the development of your training programs. In addition to being an excellent source of information, this involvement will improve the working relationship and level of understanding between your agency and the disability community.

Given the differences that exist in the size and type of transportation programs across the country, the regulations leave the exact design of training programs to each entity. There are, however, several types of training that need to be considered.

Section 2 of Chapter 9 recommends elements of a training program and provides references for training material.

6

Service Models and Options



There are many different ways that paratransit service can be provided. This chapter provides a basic understanding of these various models. Recommended sources for more detailed information also are included.

Before presenting the different service models, the important issue of coordination with other agencies and providers is discussed. Section 1 discusses coordination with other public entities in your area who also are responsible for the provision of complementary paratransit service. Section 2 offers suggestions for coordination with human service agencies.

Having an understanding of all of these options is important for both new and existing systems. If you will be starting a new paratransit service to meet the complementary paratransit service requirements, you should select a model that best suits your local conditions and needs. You need to consider the various options if you are facing an undue financial burden and will be submitting a request for a waiver as part of your plan. UMTA's review of your waiver request will include a review of the service model you have selected, the level of coordination you have achieved, and the operating procedures you have established. If it appears that alternative approaches can be taken to lower costs or to increase the level of service provided, your request for a waiver may be rejected.

Section 1.

Coordination with Other Providers of Complementary Paratransit Service.

Many public entities which operate federally-funded transit systems now meet Section 504 requirements by operating only accessible fixed route service. Other public entities which operate fixed route services without USDOT funding (such as public hospitals, or cities and towns) also may be considering paratransit services for the first time.

As the number of entities responsible for providing paratransit service increases, so does the likelihood that service areas will overlap. To avoid costly duplication of effort, the regulations strongly encourage public

entities to coordinate the provision of complementary paratransit service.

If your agency does not receive federal transit assistance and will be starting a new paratransit service, contact the public transit agency in your area. Explore options for purchasing service through their paratransit program or otherwise combining efforts.

If your agency does not receive federal transit assistance and will be starting a new paratransit service, contact the public transit agency in your area. Explore options for purchasing service through their paratransit program or otherwise combining efforts.

If you are the public transit agency for your area, identify other public entities providing fixed route service in your area as part of your planning process. Consider preparing a joint plan that meets all of the requirements within your region.

The provision of coordinated services is often more cost-effective than the operation of separate services. Duplication of scheduling and administrative functions is eliminated. Fewer total vehicles are required as opportunities for grouping trips increase. Coordination also leads to the provision of better service to persons with disabilities. Transfers between service areas are more easily arranged and confusing service boundaries and restrictions are eliminated.

One approach to coordination where

service areas overlap is to have a "lead" agency (e.g. the public transit agency) operate the service and have other entities purchase service. The amount of financial support provided by each participating agency could be determined by the number of vehicle miles of fixed route service provided by each in the area where services overlap.

Another approach is to clearly delineate areas of service and then develop effective methods for handling travel between these regions. Each agency would be responsible for meeting all service requests within its area under this approach. Regular communication between scheduling offices can be used to arrange for out-of-area travel.

Section 2.

Coordination with Human Service Agencies

Human service agencies spend far more on client transportation each year than transit agencies spend on public paratransit services.⁵ You should involve

these organizations, as well as cities and towns or other entities now providing transportation to persons with disabilities, in your ADA paratransit service plan.

You do not need to duplicate services that are already being provided. A key provision of the ADA (Section 223) allows you to include the transportation services provided by other entities in your paratransit plan. You only need to supplement existing services where they do not comply with the service criteria for comparability.

For example, a community action agency may already be providing demand responsive transportation in the area served by your fixed route system. This existing service may meet all of the paratransit service criteria but may be

capacity constrained. Your ADA paratransit plan would not need to propose a new service. Instead, you could describe this existing program and indicate your intent to supplement their funding to allow for

unconstrained travel by ADA paratransit eligible persons.

If other transportation programs are included in your plan, you must ensure that service continues to be provided in compliance with the regulation. An ongoing relationship, which would allow for continuing oversight and help avoid unexpected changes in service design, is recommended.

Benefits of Coordination

While the regulations do not ***require*** that you develop your plan in cooperation with other agencies, doing so can be helpful in a number of ways. Coordination with other agencies and providers can reduce the cost to your agency of providing required services. Transportation services that are coordinated are also easier for consumers to understand and use.

If you are the public transit agency for your area, identify other public entities providing fixed route service in your area as part of your planning process. Consider preparing a joint plan that meets all of the requirements within your region.

Coordination also eliminates costly duplication of services. The ADA paratransit eligible population overlaps with many other populations. Many persons are elderly. Others are clients of vocational rehabilitation programs or programs for persons with cognitive disabilities. Agencies which serve these other populations very often provide transportation services to their clients. If your paratransit service focuses only on a small part of each of these client groups and is not coordinated with the larger agency transportation program, duplication of services

may result and public resources may be wasted.

Finally, developing a cooperative working relationship with other funding agencies will increase the chance that existing providers will maintain their level of effort. If you begin duplicating other services and do not involve other providers in your planning efforts, it is very likely that clients of other programs will be referred to your system.

Ways to Coordinate

Coordination of services can be achieved in many different ways and at many different levels. It can be as simple as a well organized information and referral network with each party committed to meeting certain needs. It can involve cooperative efforts in specific operating functions such as driver training or vehicle maintenance in order to ensure a consistent level of quality service. More formal efforts can include jointly setting up a "brokerage" service to coordinate the activities of each operator and direct trips to the most appropriate provider. Or it can involve consolidation of services with one agency assuming a lead operating role and other agencies purchasing service from this provider.

Selection of the appropriate model for your area will depend on a number of factors.

A consolidated operation with purchase of service agreements is appropriate if the bulk of services are presently being provided by a large and capable provider. Brokerage may be appropriate if several capable providers exist and a decision is made to maintain independent operations. Less formal information and referral networks may be appropriate for smaller agencies which lack the resources to buy into a central system or share the cost of a broker.

In developing plans for coordination, you should distinguish between programs that

If you begin duplicating other services and do not involve other providers in your planning efforts, it is very likely that clients of other programs will be referred to your system.

have a longstanding commitment to transportation (and possibly a requirement or mandate that transportation be provided) and those programs that are

more local and discretionary in nature. Examples of formal, longstanding programs include: Title XIX (Medicaid) transportation for medically-related trips; Head Start transportation; Vocational Rehabilitation transportation for work training and education; and, in some states, the transportation of persons who are mentally retarded to day programs. Less formal programs include transportation services for older persons operated by councils on aging, or transportation provided by individual community residence programs.

Availability of funding and maintenance of effort are typically less of a concern for formal, longstanding programs. It is often possible to achieve coordination with these funding sources by simply qualifying as a vendor to provide the service (or having your operator apply and qualify) and billing the agency once service has been provided. The major issues when working with these funding sources tend to be regulatory issues and process issues such as recordkeeping and billing. Because these programs represent large dollar expenditures and are likely to continue, be

sure to pursue these resources at a minimum.

Working with less formal, discretionary local programs can be more difficult. Many of these programs utilize general staff, part-time workers, and volunteers to operate their transportation services. Administrative costs and overhead expenses may be built into the agency's total budget and may not be readily identifiable as transportation expenditures. Savings from coordination can be hard for such programs to identify. Instead, pursue coordination with these agencies as a way to improve the level of service to clients or reduce the administrative burden to the agency. The provision of transportation by these agencies is also often a political "turf" issue.

Keys to Coordination

There are several keys to developing coordinated transportation services. It is important to:

(1) ***Develop political support for coordination.*** Other agencies are more likely to respond to the idea of coordination if local political consensus has already been developed. Agencies also are less likely to reduce their efforts and support for client transportation if there is a public recognition that everyone needs to participate and do their fair share. If this support does not already exist, work with state, county, and local officials and stress that a cooperative approach to meeting the transportation requirements of the ADA is in the public interest as well as the interest of human service agencies and their clients.

(2) ***Develop a working relationship with human service agencies.*** A recent report which examined coordination efforts in Alabama, Georgia, and North Carolina noted the importance of developing trust and lines of communication between agencies.⁶ Regular meetings to discuss the transportation needs of clients can build important personal and institutional relationships.

(3) ***Consider the total transportation needs of other agencies.*** Don't approach coordination as a way to meet just ***your*** transportation requirements. A coordinated system must consider the total transportation needs of all participants. Another agency's client population, service area, or hours of service may be broader than your own. There may be little reason to become involved in a coordinated service if participants will still need to operate a separate service to meet remaining needs.

Expanding the system to meet these other needs does not necessarily mean that the entire service must be expanded. Broader eligibility standards, service area, hours or other policies can apply only to contracts with particular agencies.

(4) ***Be flexible in the design of contract services.*** The procedures you employ in the operation of your general public service may not always be appropriate for client transportation services. Agencies may need the flexibility to make last-minute changes in the schedule or add-ons on the day of service. They may need guaranteed/dedicated hours, group

Keys to Coordination

1. Develop political support for coordination

2. Develop a working relationship with human service agencies.

3. Consider the total transportation needs of other agencies.

4. Be flexible in the design of contract services.

5. Be flexible in developing rates.

services, or monitors to travel with certain clients. Keep in mind that as a contractor paying for the full cost of service, agencies should be able to set service standards and procedures that best meet their needs. Also keep in mind that while agency staff may not be transportation professionals, they do know their clientele and their needs. Be open to accommodating these needs in contract negotiations. Certain special requests may not always fit well into your coordinated service plan and may be more expensive to meet. In these cases, calculate the extra cost involved and let the agency decide if the special requests are worth the price. You may then be able to offer alternative approaches that are more in keeping with your standard service plan.

(5) *Be flexible in developing rates.*

There are many different ways to calculate rates. The most common are cost/trip, cost/hour, cost/vehicle-mile, and cost/passenger-mile. Not all of these methods for calculating cost are appropriate to all types of service. Offering agencies rates that are appropriate for their type of service and which equitably allocate total costs will increase your chances of developing coordinated services. Cost/hour and cost/vehicle-mile are more appropriate for contracts where vehicle time is dedicated. Cost/trip and cost/passenger-mile should be used in shared-ride services. Rates also will change depending on the type of service. The cost/trip of group transportation will be much lower, for example, than the cost of individual service. There are a number of good publications which describe different approaches to coordination and offer other more detailed suggestions.

☛ Several are included in "Sources of Information and Technical Assistance" which is Appendix K.

☛ Best Practices in Specialized and Human Services Transportation Coordination (Report # DOT-T-89-20), prepared by the Center for Systems

and Program Development, Inc. and jointly funded by the U.S. Department of Transportation and the U.S. Department of Health and Human Services is a recent publication that may be particularly helpful. In addition to describing several successful programs, it provides a list of federal human service funding for transportation.

Section 3.

Service Models

There are a number of ways in which paratransit services can be provided. In general, you can provide service by:

- operating your own paratransit fleet (*direct operation*);
- setting up a *brokerage system* that utilizes providers in the area;
- establishing a *user-side subsidy* program; or
- creating a system that is a *combination of the above models*.

There are also options for making your fixed route service more accessible to persons with disabilities. A "*Call-A-Lift-Bus*" program can provide an alternative for persons able to use accessible buses in cases where the routes are not yet accessible. *Service routes* can be designed to better target your fixed route system to the needs of persons with disabilities.

Services also can be developed that combine the regularity of fixed route operation with the flexibility of demand responsive service. *Route deviation* and *point deviation* systems, in which rider-initiated requests determine exact routes, are two examples. Route deviation systems are considered demand responsive service by the USDOT regulations.

Following is a brief description of each of these paratransit and fixed route service models.

Direct Operation

Direct operation is perhaps the most common type of paratransit service. Vehicles can be operated ***in-house***, or by another public agency or private company ***under contract*** to you. Depending on the size of the service area and the total population to be served, the fleet can be either centrally controlled or scheduled and dispatched from sub-area offices. If "satellite" centers are employed, the operational issue of transfers between these areas should be addressed.

With direct operation, coordination is usually handled by having other agencies purchase trips or hours of service from you or your provider.

An ability to adjust the supply of service is a major consideration if a direct operation model is selected. Seasonal fluctuations in demand, as well as general trends in ridership, need to be carefully recorded so that an adequate supply of drivers and vehicles are available. If the service is contracted out, the contract must be flexible enough to allow supply to be adjusted throughout the term.

☛ A case study of direct operation is provided in Appendix G.

Brokerage

The second alternative, brokerage, is becoming more popular as a way to effectively organize the transportation services provided by existing agencies and operators into a single, coordinated system. Brokerage usually involves establishing a central administrative entity, the broker, which matches individual service needs as well as agency funding and contracts with providers in the area. By centralizing the administrative function of contracting for service, similar or complementary needs can be matched and duplication of effort

minimized. The broker can, for example, combine the mid-day nutrition transportation needs of a senior service program with a work training program that requires morning and afternoon service. Similarly, the broker can arrange for evening or weekend transportation by identifying providers whose vehicles are available at those times.

In brokerage programs, eligible riders can either be instructed to call designated operators or can have their requests channeled through a central scheduling office.

The broker also can ensure consistent driver training, monitor other aspects of service quality, and centralize billing and recordkeeping activities.

Another advantage of brokerage is that a number of local providers can be involved in the provision of service. As the demand for service increases or decreases, the supply of service can be adjusted. Involving a number of providers also maintains a level of competition that can act to help control costs.

Coordination of service can be achieved in a brokerage program by either getting other agencies to also channel their services through the broker or by involving human service transportation providers as operators in the system.

☛ Several examples of brokerage projects are described in Best Practices in Specialized and Human Services Transportation Coordination which is cited in Section 1 of this chapter. One of these case studies is included in Appendix G. Other references are contained in Appendix K.

User-Side Subsidy

User-side subsidy represents a third type of service. Like brokerage, user-side subsidy utilizes existing transportation providers in the area.

By centralizing the administrative function of contracting for service, similar or complementing needs can be matched and duplication of effort minimized.

Trip tickets or vouchers, which are used in place of a cash fare, are sold to eligible users of the service. Riders then can call participating transportation operators. Often, a number of operators are involved, including taxi companies and private van operators, as well as public or non-profit providers. Riders call the provider of choice and pay for service using their trip tickets or vouchers. Provider agencies then redeem vouchers with the administering agency for payment.

A recent review of paratransit systems across the country found that many user-side subsidy programs are substantially less expensive than conventional paratransit models, particularly in larger urban areas.⁷ By utilizing private taxi and van providers, you also can benefit from the extended hours of operation and minimum advance notice requirements that these systems typically employ.

By utilizing private taxi and van providers, you also can benefit from the extended hours of operation and minimum advance notice requirements that these systems typically employ.

User-side subsidy programs also are well suited to handle fluctuations in demand. Because the public transit service is often part of a larger general public taxi or van operation, the number of vehicles dedicated to the service can be quickly adjusted depending on the expressed demand.

If strict ADA paratransit eligibility standards are used, however, and individuals are eligible for certain trips and ineligible for others depending on the availability of accessible fixed route service (see Section 3 of Chapter 4), a user-side subsidy model will require voucher systems or eligibility verification systems that are more complex than have typically been used to date. Operators will need to be able to determine whether or not a requested trip is eligible. This additional administrative expense may off-set some of the cost advantages that have been associated with this model.

Appendix G describes the user-side subsidy program operated in Milwaukee, Wisconsin. Additional information about user-side subsidy programs and how to plan and operate them is available in ***User-Side Subsidy Programs for Special Needs Transportation: A Planning Handbook*** (see Appendix K).

The Public Private Transportation Network (PPTN) program is also a good source for assistance for developing user-side subsidy programs utilizing private providers. The PPTN can be contacted by calling 1-800-522-PPTN.

Combined Models

Finally, services can be provided by developing a system that combines the above models. For example, trip requests that cannot be accommodated by a direct operation can be brokered to other local providers. In this way, fluctuations in demand can be met without maintaining a high ratio of spare vehicles. Direct operation or brokerage systems also can be supplemented by user-side subsidy programs to provide late night or weekend service or to take advantage of inexpensive taxi service for those eligible individuals who are ambulatory (accessible taxi programs using low floor, ramp-equipped minivans also should be considered).

Selecting an appropriate model for your area will depend on a number of local conditions and factors. Direct operation may be most appropriate if few other providers exist or if other agencies are unable to share the cost of a broker. Brokerage may be best if a number of well-established human service transportation providers exist or if your agency does not wish to assume the administrative responsibilities associated

with a direct operation. A user-side subsidy program may be most appropriate in larger urban areas where numerous taxi and other private providers are available.

Call-A-Lift-Bus Service

Several operational improvements are possible which allow fixed route services to better meet the needs of persons with disabilities. It is recommended that you consider these improvements as an integral part of your complementary paratransit planning process. Making your fixed route service more available to and useable by individuals with disabilities will reduce reliance on your paratransit system.

One possible improvement is on-call fixed route bus service, also commonly referred to as Call-A-Lift-Bus service. These services are meant to maximize the availability of lift-equipped buses before the fixed route fleet is fully accessible. Basically, Call-A-Lift-Bus programs allow individuals to call ahead to request that an accessible bus be used on a particular route at a time when they need to travel. Following is a brief description of two established and successful programs:

Washington, D.C. - The Washington Metropolitan Area Transit Authority (WMATA) has been providing On-Call lift bus service since 1982. The program was started at that time using 149 accessible buses out of a total fleet of about 1,200 vehicles. Individuals who do not live on one of WMATA's 16 "dedicated" routes (on which all vehicles are accessible), can call and request an accessible bus any time up to 3 pm on the day before service. Calls are received by the Metro-Bus On-Call Service Office, which was created to administer the program. This office is part of the Department of Bus Services, the office within WMATA which is responsible for fixed route bus operation. At 3 pm each

day, the supervisors of WMATA's 10 bus garages are notified by phone of all requests for service on routes covered by that garage. This telephone notification is followed-up with written notification by 5 pm each day. WMATA presently provides about 3,100 on-call lift-bus trips each month using a fleet of 555 accessible buses.

Boston, Massachusetts - The Massachusetts Bay Transportation Authority (MBTA) began offering Call-A-Lift-Bus service in 1986 using 200 accessible buses (or about 20% of the total fleet at that time).

Requests for service are taken by the Office of Transportation Access, which also manages the local paratransit service and works on other access issues

within the MBTA. This office is part of the MBTA's Operations Directorate. Calls must be received by 1 pm on the day before service. As request forms are completed, they are FAXed to the District Supervisors at one of the MBTA's 7 bus garages. An accessible bus is then dispatched at the time requested. The following bus on that route is also accessible in case the person misses the first bus or the lift on the first bus malfunctions. Approximately 250 rides are provided per month on the system using 473 accessible buses. The MBTA also has 32 "dedicated", fully accessible routes in its system and reports that on-call use has decreased as the number of dedicated routes has increased.

Both of these systems reported that data from their Call-A-Lift-Bus programs helped them select new "dedicated" routes as additional lift-equipped buses were added to the fleet.

☛ Appendix G includes a brochure that describes the MBTA's Call-A-Lift-Bus program.

Making your fixed route service more available to and useable by individuals with disabilities will reduce reliance on your paratransit system.

Route Deviation and Point Deviation Services

Reviewing fixed route alternatives may be particularly important in rural and small urban areas. It may be cost-effective in some areas to consider replacing existing fixed route service with a general public demand responsive service. Another alternative which may be appropriate in these areas is route deviation or point deviation service. In route deviation systems, vehicles operate along a fixed route and follow a set schedule. Vehicles can deviate from the set route, however, if a request is made by a rider. After deviating from the route, vehicles return to the same point to continue their run. Point deviation systems are similar but are even more flexible. In these systems, specific stops (pick-up and drop-off "points") are established and the vehicle arrives at these stops at designated times. There is no set route between these stops, however, and the vehicle operates in a door-to-door mode as required to meet passenger needs.

The amount of deviation from routes and schedules permitted in these systems can vary. The USDOT regulations do not specify what level of user-initiated flexibility is needed for these systems to be considered demand responsive rather than fixed route service. Several issues that should be considered, however, include:

- permitting vehicles to deviate far enough from either side of the fixed route to meet the needs of riders;
- allowing vehicles to leave the route for pick-ups as well as drop-offs. This may require advance reservations or a communication system that would permit rider requests to be transmitted to the driver en route;
- establishing other service policies that provide equivalent service. For example: allowing user-initiated deviations during all days and hours of operation and for all trip purposes.

Service Routes

The development of "service routes" is another alternative that can enhance conventional fixed route operation. Service routes are designed specifically to reduce the distances that elderly persons and persons with disabilities must travel to get to bus stops. Particular attention is given to the travel patterns of persons with disabilities. Routes are designed using information from existing paratransit service, accessible housing information, and other available data. While routes are designed around the travel needs of persons with disabilities, they are open to the general public. Service routes can be overlaid on the existing fixed route network or conventional routes with low ridership can be replaced with service routes. Smaller accessible vehicles are used on these routes which can be operated either as conventional fixed route or as route deviation service. Service routes also can be designed to provide feeder service into the rest of the fixed route network.

In Boras, Sweden, where the concept first was developed, the introduction of service routes reduced the use of the local paratransit service by 40-50%.

- ☛ An article about this concept, which recently appeared in a ***Project ACTION Update***, a newsletter of the National Easter Seal Society, is included in Appendix G.

Travel Training

Use of accessible fixed route services also can be greatly improved by consumer travel training programs. Training can be offered by employees of your agency or you can work with or contract with local disability groups to provide this service. Peer training, where experienced riders of the fixed route system train other persons with disabilities has been found to be particularly effective.

- ☛ An overview of different types of travel training programs is provided in Appendix G.

Twelve grants to develop local travel training efforts were recently funded through Project ACTION, an UMTA-funded program administered by the National Easter Seal Society. One goal of this program is to develop materials that can be used by transit providers nationwide. A list of these projects is contained in Table 6.1.

Projects are scheduled to be completed in early 1992 and a national conference to present results is planned.

☛ If you are interested in establishing a travel training program in your area, you can contact Project ACTION by calling:

**(202)347-3066, or
TDD (202)347-7385.**

Table 6.1

Consumer Travel Training Projects Funded by UMTA and the National Easter Seal Society as Part of Project ACTION
<ul style="list-style-type: none">• Massachusetts Coalition of Citizens with Disabilities, Boston, Massachusetts.• Buckeye Paralyzed Veterans of America, Euclid, Ohio.• San Antonio Independent Living Services, San Antonio, Texas.• Regional Transportation Commission, Reno, Nevada.• Ecosometrics, Bethesda, Maryland.• Goodwill Industries of Mid-Eastern Pennsylvania, Shillington, Pennsylvania.• Access-A-Ride, New York, New York.• League of Human Dignity, Omaha, Nebraska.• The Kennedy Center, Bridgeport, Connecticut.• Focus on Community Understanding and Services, Columbus, Ohio.• Easter Seal Society of Utah, Salt Lake City, Utah.• Community Council of Phoenix, Phoenix, Arizona.

7

Developing Your Plan for Complementary Paratransit Service



As noted in Chapter 2, each public agency that operates a fixed route public transit service is required to develop and submit a plan indicating how and when complementary paratransit service requirements will be met. This chapter offers guidance on the preparation of paratransit plans. Regulatory requirements are presented and a methodology for developing plans is suggested.

Section 1.

When and Where to Submit Plans

Individual Plans

Plans that apply to only one entity must be submitted by January 26, 1992. Plans must be submitted to the UMTA Regional Office for the area or the state administering agency (DOT or other designated state agency) as indicated in Table 7.1.

☛ A list of the UMTA Regional Offices is provided in Appendix K.

Plans must be updated annually and submitted by January 26 of each year to the appropriate agency.

Joint Plans

Where the service areas of two or more public entities overlap or are contiguous, a coordinated planning process is encouraged. A single plan may be developed and submitted as a joint effort. All elements of the plan that can be developed by January 26, 1992 should be submitted at that time. Portions of the

plan that cannot be completed by that time must be submitted by July 26, 1992. If a complete plan is not submitted by January 26, 1992, the following certifications *from each entity* must be included with the incomplete plan:

- (1) A certification that the entity is committed to providing ADA paratransit service as part of a coordinated plan; and,
- (2) A certification that it will maintain current levels of paratransit service until the coordinated plan goes into effect.

☛ Copies of these certifications are provided in Appendix C of this handbook.

Joint plans also should be submitted as indicated in Table 7.1.

Table 7.1

Instructions for Submitting Paratransit Plans

Type of Agency	Submit Plan to:
A Section 18 recipient.	State Administering Agency
A small urbanized recipient of Section 9 funds administered by the State.	State Administering Agency
Participants in a joint plan in which all participating entities are eligible to submit their plans to the State.	State Administering Agency
Participants in a joint plan not covered above.	UMTA Regional Office
A direct recipient of Section 9 funds.	UMTA Regional Office
Any public entity that is not an UMTA recipient and is not covered above.	UMTA Regional Office

Section 2.**Survey of Existing Services**

Each entity submitting a plan must conduct a survey to identify all paratransit or specialized transportation services for ADA paratransit eligible individuals in the area. This includes services provided by individuals; other public entities; private, for-profit companies; and, private, non-profit organizations.

Section 5 of this chapter offers suggestions for conducting this survey.

Section 3.**Public Participation**

Plans must be developed *and* implemented in close cooperation and consultation with persons with disabilities and local disability groups and organizations. The regulations require

public participation *in the development of the plan* and the establishment of a mechanism for *ongoing participation*.

Five requirements for participation in the development of the plan are listed in §37.137. First, *outreach* efforts must be

The regulations require public participation in the development of the plan and the establishment of a mechanism for ongoing participation.

made to let persons who will be affected know about the planning process and to invite their participation. Key individuals and organizations in the area must be identified. Mailing lists and other appropriate means of notifying these persons and groups must be developed.

Second, *consultation with individuals with disabilities* must begin at an early stage of the planning process and must continue throughout the development of the plan. The exact method used to consult with individuals is not specified. You can work with an existing consumer advisory committee, establish a new working group or committee, or use a less formal means

of reviewing planning documents. If a formal committee or working group is used, your outreach efforts should include providing widespread notice of these meetings. If a less formal method is used, individuals should be kept informed as the plan develops and should be instructed on how to offer their comments. All planning information not protected by privacy laws must be available for review throughout the process.

Third, an **opportunity for public comment** must be provided before the plan is finalized. The draft plan should be available in accessible formats upon request.

Fourth, at least one **public hearing** is required. Adequate notice of the hearing must be given. Local newspapers, radio stations, consumer newsletters, and other special interest information outlets must be used to ensure that consumers, including those who have vision or hearing impairments are notified. To meet the public comment requirement described above, include in your notice of public hearing a statement that the plan is available for review. Have an adequate supply of large print, tape, and braille versions available **prior** to giving this notice.

If your plan proposes an implementation period greater than one year, there is a **special public hearing requirement**. In this case, input must specifically be requested on the phase-in of each required service criteria. Information which clearly describes the proposed implementation of milestones should be presented at the public hearing for comment.

Public participation must continue after the plan is submitted. Individuals with disabilities and disability groups should remain involved in the implementation, assessment, and revision of plans. The exact form of this ongoing participation is not specified in the regulations.

Section 4 of Chapter 8, "Keys to a Successful Public Process", presents

several options. This chapter also offers a number of suggestions for making your public process positive and productive.

Section 4.

Contents of the Plan

Section 37.139 of the regulations provides a detailed listing of items that must be included in each paratransit plan. Eight general categories of information must be provided. These are:

- (1) General information about the entity or entities submitting the plan;
- (2) A description of the fixed route system as of January 26, 1992;
- (3) A description of existing paratransit services;
- (4) A description of the proposed complementary paratransit service;
- (5) Information about the proposed eligibility determination process;
- (6) A description of the public participation process used to develop the plan;
- (7) A discussion of efforts to coordinate the provision of service with other public entities in overlapping or contiguous areas; and,
- (8) the certifications and resolutions contained in Appendix C of this handbook.

The above information must be provided whether or not you request an undue financial burden waiver. If a waiver is requested, documentation showing that an undue financial burden does or will exist must be included in the plan. A description of the paratransit service that will be provided if the request is denied also must be included.

☛ Guidance on the preparation of waiver requests is provided in Appendix F of this handbook.

Table 7.2 provides a detailed listing of the required contents of paratransit plans.

Table 7.2: Paratransit Plan Contents

Section 1 - *General Information about the Entity or Entities Submitting the Plan*

- Name and address of each entity.
- Contact person for each entity with a telephone number (and a FAX number).

Section 2 - *Description of the Fixed Route System*

- Population served, service area, route structure, days and hours of service, and fare structure (include maps and tables, as appropriate).
- Number of vehicles in service (including contracted service).
- Percentage of fleet that is accessible and percentage of routes that are accessible (distinguish between vehicles meeting Part 38 specifications and those which do not).
- Any other information relevant to comparing fixed route and paratransit service.

Section 3 - *Description of Existing Paratransit Services*

- Service provided by the submitting entity (eligibility requirements, service area, response time, fares, restrictions on trip purpose, hours and days of service, capacity constraints, fleet information, ridership information).
- Service provided by others in the area (same information as above).

Section 4 - *Description of the Proposed Complementary Paratransit Service.*

- An estimate of demand and a brief description of the estimation methodology.
- Analysis of differences between current service and required service.
- Description of planned modifications to existing paratransit and fixed route service.
- Description of how the proposed paratransit service will meet each of the six service criteria.
- Timetable for implementation, including milestones that can be objectively measured each year.
- A five year capital and operating budget.

Section 5 - *Description of the Proposed Eligibility Determination Process*

- Availability of application materials and information in accessible formats.
- Description of the determination process, including method of notifying individuals about determinations.
- System and timetable for processing applications and allowing presumptive eligibility.
- Documentation that will be provided to persons determined ADA paratransit eligible.
- Description of the administrative appeals process.
- A policy for visitors.

Section 6 - *Description of the Public Participation Process Used to Develop the Plan*

- Outreach efforts, process used to consult with persons with disabilities, notice given of the opportunity for public comment, date(s) of completed public hearings, and availability of the plan in accessible formats.
- Summary of significant issues raised in the public comment period, a response to each, and a discussion of how the issues were resolved.

Table 7.2: Paratransit Plan Contents (Continued)**Section 7 - *Efforts to Coordinate the Provision of Complementary Paratransit Service with Other Public Entities in the Area or in Contiguous Areas who are Responsible for Developing Plans.*****Section 8 - *Certifications and Resolutions (by each public entity involved in the plan).***

See Appendix C of this handbook for copies.

- Resolution by the board of directors or chief executive authorizing the plan as submitted
- MPO certification of compliance with joint planning requirements.
- Certification that a survey of existing paratransit service was conducted.
- Joint plan certifications, if applicable (required only if full plan not completed by 1/26/92).
- Certification regarding other paratransit services included in the plan.

Section 9 - *Request for a waiver (if applicable)*

- Information sufficient for UMTA to consider the request (see Appendix F of this handbook for additional information).
- Description of the paratransit service that will be provided if the waiver is denied and a timetable for implementing these services.

Section 5.**A Proposed Planning Process**

The flow chart provided as Figure 7.1 identifies a suggested sequence of major activities that must be undertaken to develop a paratransit plan in compliance with the above noted requirements. This planning process has three parts. The first part (STEPS 1 - 4) involves the collection of information and the establishment of a consumer advisory process.

The second part involves setting service parameters, reviewing alternative models for providing the desired service, and determining service costs. On your first pass through this stage of the process, set parameters for a paratransit plan that is in full compliance with the regulation within the allowed implementation period. Also establish a first set of service parameters which do not include any reductions in other existing paratransit efforts which you may now be providing above and beyond ADA requirements. Look first at the possibilities for providing the full range of paratransit service

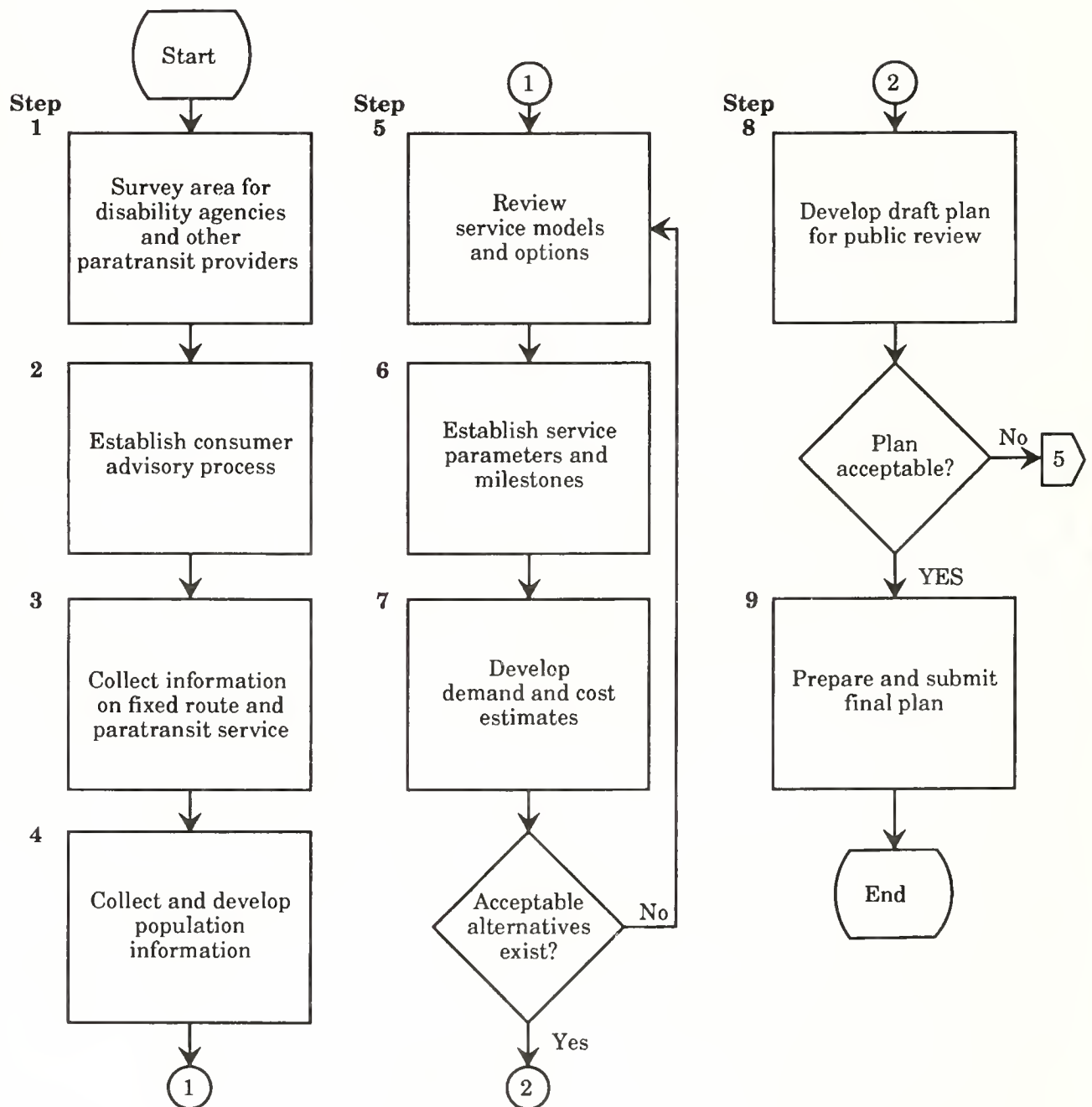
needed in your area. Examine reduced levels of effort only if providing the ideal service is found to be infeasible.

In the second stage of the process, determine the amount of funding that would be required to fully implement complementary paratransit services while maintaining other paratransit and fixed route programs and whether or not this level of funding can be provided. If not, examine alternatives for either reducing other existing services or applying for an undue financial burden waiver.

The third phase of the process involves the preparation of a draft plan, the public review process, and the revision of the draft plan in response to public comment.

While this process is presented as a way to develop the initial paratransit plan, planning should be an ongoing activity. Update population information and demand estimates throughout the implementation period as actual service information becomes available. Adjust your system design and service parameters as travel patterns and local

Figure 7.1
Proposed Planning Process



financial situations change. Monitoring and evaluation of services, including evaluation by a consumer advisory committee, should also be an ongoing activity.

Following is a brief description of each of the steps in the process:

STEP 1: Survey the Area

Your success in developing a plan that is both workable and acceptable to consumers will depend to a great degree on your ability to identify and involve those individuals and organizations affected. The first step suggested, therefore, is a survey of the area to identify disability groups, human service agencies, and key consumer advocates to be involved in the planning process. This survey will help you establish a consumer advisory process that is inclusive and representative. It also will make the collection of population information and other service information easier if key providers and agencies are involved.

☛ Chapter 8, “Keys to a Successful Public Process”, offers suggestions for identifying and involving persons with disabilities and consumer organizations.

☛ Appendix K lists national organizations that can be contacted for information about local, regional, and state offices.

Also identify newsletters, publications, and other media that disability groups are now using. Commissions for the blind, community centers for the hearing-impaired, and independent living centers often provide information to clients and members. Developing a list of these methods of communication will help facilitate outreach efforts.

As noted in Section 2, a survey of existing paratransit providers is a required part of the planning process. This survey also should be completed at the start of your planning process. Many human service

agencies in your area, such as councils on aging, community action agencies, independent living centers, mental health centers, local Red Cross chapters, and workshops and day treatment programs may fund or operate paratransit services. A listing of all non-profit agencies in your area who have received federal Section 16 (b)(2) vehicles can be obtained from your State Department of Transportation.

Independent living centers are also a good source of information about transportation services available for persons with disabilities.

Your survey of providers also should identify private providers, including taxi and van companies. Taxi companies are typically licensed by each local community in which they operate. Information about taxi services, including the number of vehicles operated and approved fares can be obtained from each city or town in your area. Private van companies usually contract with state and local welfare offices and vocational rehabilitation agencies. These agencies should be contacted as part of your survey. Finally, check the “Bus”, “Taxicab”, and “Limousine” listings in the Yellow Pages of local telephone directories.

STEP 2: Establish a Consumer Advisory Process

Although the regulation does not require a formal consumer advisory process, consider creating a formal committee if you anticipate that meeting complementary paratransit service requirements will result in significant changes to your existing program. This approach also is recommended if you currently do not provide paratransit services.

As an alternative to a formal committee, develop a list of advocates and disability groups and consult informally with them throughout the process. Be sure, if you use this more informal method, to consult with a broad cross-section of persons with

various types of disabilities. Supplement this informal consultation with open meetings at key points in the planning process. Provide notice of these meetings using the mailing lists developed in STEP 1.

Plan an initial meeting of your committee or working group to begin your consumer advisory process. If you have an ongoing consumer committee, set aside a regular meeting time or set up a special meeting to focus on ADA paratransit issues. To accommodate the schedules of people who are working, consider holding this initial meeting in the evening (assuming that adequate transportation is or can be provided). Invite agencies identified in your area survey and utilize media sources, including sources accessible to persons with vision and hearing impairments, to announce the meeting and invite public participation. Include in your meeting notice a description of the kind of accommodations that will be available, such as interpreters, large print, braille, or taped material, or transportation to and from the meeting. Invite participants to contact your agency if any other accommodations are needed. Making this and other meetings physically accessible and communications accessible (see Appendix E) is important to demonstrate good faith effort on your part.

At this first meeting, explain the relevant portions of the regulations and describe the planning process, including points at which input will be most important. Invite questions about the regulations and suggestions on the planning process. Establish common goals. Explain your outreach and survey efforts and invite additional references and information, particularly if there is not good cross-disability representation.

Involve consumers in all stages of the planning process. There are several key points at which consumer input is particularly important. These include:

- Before beginning STEPS 4 and 7. Describe to consumers the

methods you intend to use to generate population and demand information and invite suggestions and assistance.

- Once STEPS 4 and 7 have been completed. Attempt to develop consensus on the population and demand figures that form the basis of cost estimates. If developing accurate estimates proves difficult, consider an agreement to use the best numbers available at the time, to continue to pursue better estimates, and to alter the plan if better information is developed.
- To establish desired service parameters and select service models to be evaluated (STEP 5 and STEP 6).
- Once costs of alternatives have been developed and preliminary decisions on their affordability have been made. This part of the input process - reconciling consumer desires with the funding realities of your organization - can be the most difficult. In doing this, it is important to openly present and discuss budget and financial considerations to dispel any feeling that paratransit services are not receiving fair and equal treatment.
- To evaluate service parameters if initial alternatives are not affordable.

As noted earlier, plans must include specific eligibility guidelines and a process for determining who is ADA Paratransit Eligible. Consider setting up a subcommittee or identifying a subset of your advisory group to assist you with this portion of the plan. Begin a discussion of eligibility early in the process. Decisions about eligibility will need to be factored into STEP 6 as one of the parameters of the service.

As discussed in Chapter 8 of this handbook, it is important that your working group or advisory committee not function in isolation from other advisory or decision-making bodies within your organization. Top level staff, board members, and other officials should be encouraged to participate in the process. This will create an understanding of the issues at all levels of your agency. It also will demonstrate the commitment of your agency to the process. Additional suggestions for developing a successful consumer advisory process are contained in Chapter 8.

STEP 3: Collect Information on Fixed Route and Paratransit Service

One required element of the plan is a comparison of existing fixed route service and paratransit service. This comparison must clearly identify areas in which the paratransit service is and is not **comparable** to fixed route service. Comparability is based on the six service criteria listed in the regulations and described in Chapter 5 of this handbook.

Because your paratransit plan will be implemented over a period of time, information collected to make this comparison must include present service characteristics as well as planned service changes. For example, expected fixed route bus purchases or route changes must be part of your information base. Changes in the level of service of other paratransit programs also should be considered.

If service characteristics vary by area, these differences also need to be captured in your review.

If feasible, include in your plan a map of your fixed route system showing present routes and stations, and planned changes. Identify those routes in the system which are considered solely commuter routes.

Other **fixed route** information to be collected includes:

- ***Days and hours of operation.*** Chart the differences in service days and hours by area, indicating where weekend and evening service exists.
- ***Fare information.*** Tabulate fares by zone, including any discounts provided.
- ***Total number of buses.*** Using approved capital replacement plans, tabulate changes in fleet size based on expected purchases and retirement schedules.
- ***Number and distribution of accessible buses in the fleet.*** Tabulate the number and percentage of buses that will be accessible over time. Map routes that are accessible currently and

...it is important that your working group or advisory committee not function in isolation from other advisory or decision-making bodies within your organization.

those that are planned. Your inventory of lift and ramp equipped buses should take the Part 38 specifications into

consideration. Identify those buses that meet the specifications versus those that do not.

- ***Rail stations and fleet information.*** Map routes and stations and identify those that are now accessible and those that will be made accessible. Also identify bus-rail transfer stations and those portions of the service area that are inaccessible because a transfer is required and one mode is not accessible.
- If a request for a waiver is included in the plan, ***ridership and population information*** will be needed. This includes the total population served by the fixed route system and the daily or annual ridership, excluding ridership on solely commuter services.

Additional information that may be helpful in making a comparison of fixed route versus paratransit capacity constraints includes any measures of unmet demand such as the number of missed runs or the number of additional trips that could be provided on the fixed route system with reasonable increases in service levels.

Information about **paratransit** services must include basic information which relates to the required service criteria, such as the **service area** covered, the **days and hours of operation** by area, **advance reservation requirements**, **fares**, and **trip priorities**.

Information needed to determine the severity of capacity constraints in the system includes the number and percentage of **trips that are refused**. This includes not only individual trip denials but a calculation of unmet requests based on any waiting lists for subscription service. Review the number and percentage of accessible vehicles in the fleet. Determine if the fleet mix adequately serves persons who require accessible vehicles by comparing refusals for this population with the total eligible paratransit population. If the refusal rate is consistently higher for persons who use wheelchairs, increase the percentage of accessible vehicles in your fleet.

Additional paratransit information that will be helpful in developing demand and cost estimates includes:

- The number of **registered riders**. To assist in estimating the ADA Paratransit Eligible population, analyze present rider records and estimate the number of persons who qualify under each of the ADA eligibility categories. This information will help you to develop estimates of the percent of eligible persons who will be using your service - part of STEP 7.
- The number of one-way **passenger trips** provided. If

possible, estimate the number of trips made by persons who will qualify for ADA complementary paratransit service and those who will not. This information will help you develop baseline trip-making rates for your present and projected riders - also part of STEP 7.

- **Cost** information, including cost/trip, cost/hour, and cost/mile. This information will be useful in reviewing service options and in calculating the cost of compliance once demand estimates are made.

Also collect information about other paratransit systems and funding. Agencies identified in your survey of the area (STEP 1) can be helpful in getting this data. Tabulate the amount and type of service provided by other entities. Sources of funding used to support this service, and the likelihood of its continuation, is also important. This information will be needed in STEPS 5 to determine what type of coordination is possible. It will also help you develop "mode split" estimates in STEP 7.

If you will be citing other services in your paratransit plan as meeting part of the need, you will need to be sure that these other services are transporting individuals who qualify as "ADA Paratransit Eligible". Work with these agencies to review client records and determine under which category of eligibility each person would be certified.

Finally, collect cost and capacity information from potential paratransit contractors in your area. Capacity information includes days and hours of operation, fleet information, scheduling capabilities, and driver training.

STEP 4: Collect and Develop Population Information

As noted in Chapter 4 of this handbook, complementary paratransit service must be provided to the following three general groups of persons with disabilities:

(1) Persons who are unable to board, ride, or disembark from a vehicle even if they are able to get to the stop and even if the vehicle is accessible;

(2) Persons who cannot use vehicles without lifts or other accommodations. These persons are eligible for paratransit service if accessible fixed route vehicles are not available on the route on which they need to travel when they need to travel; and,

(3) Persons with specific impairment related conditions who cannot travel to a boarding location or from a disembarking location to their final destination.

Those individuals who are certified under the first or third categories will remain eligible even after your fixed route system is made fully accessible. The second group of eligible persons will become smaller over time as the fixed route system becomes more accessible.

In any system that is less than 100% accessible, therefore, estimating the ADA paratransit eligible population will involve collecting information on all three groups. It also will be helpful to develop population estimates for those eligible under the second category to facilitate demand estimations later on in the planning process. As your fixed route system becomes more accessible, the demand from persons in this category will be reduced.

One way to estimate the population, if you will not be able to conduct a local study is to apply the results of other studies to your area. The 1978 National Survey of Transportation Handicapped People estimated that 5% of the total population had difficulty using fixed route public transportation.² It also estimated that approximately 50% of these individuals either could not use transit at all or could use transit only with great difficulty. While

these measures are not exactly related to the categories of ADA paratransit eligibility, they suggest that approximately 2.5% of the total population is ADA eligible.

A comprehensive recent survey of New York City conducted by KETRON, Inc. (perhaps the most extensive such study since the National Survey) estimated that approximately 2.2% of the total population is eligible for paratransit service being provided by the city.⁸ Again, while the criteria used do not exactly reflect the ADA criteria, the types of functional disabilities used are similar.

Table 7.3 summarizes estimates of the number of individuals who are eligible under the first and third categories made by James F. Hickling Management Consultants as part of the "Preliminary Regulatory Impact

Analysis of Transportation Accessibility Requirements for the Americans with Disabilities Act".⁷ Using this information together with the information from the National Survey and the New York City study suggests that:

- Approximately 1.5% of the total population is ADA paratransit eligible under categories 1 & 3; and,
- Between .7% and 1% of the total population is eligible under category 2. This figure is the difference between estimates of the total population from the National Survey and New York City survey and the estimate of persons in categories 1 and 3 made by Hickling.

These rates will vary, of course, by region and by community. One way to apply these general rates to your area is to weight them using information contained in the 1980 Census.

Approximately 1.5% of the total population is ADA paratransit eligible under categories 1 & 3. Between .7% and 1% of the total population is eligible under category 2.

Table 7.3

**ESTIMATED PERCENT OF TOTAL U.S. POPULATION
ELIGIBLE FOR ADA COMPLEMENTARY SERVICE
BASED ON PROPOSED RULE REQUIREMENTS**

	% of Total Population
Persons physically unable to board, ride, or disembark from an accessible bus	0.07
Persons unable to use the system due to visual or mental impairments	0.99
Persons unable to reach boarding locations or destinations due to specific impairment related conditions	0.42
TOTAL	1.48

Source: James F. Hickling Management Consultants. Data compiled from Canadian Health and Disability Survey and applied to the U.S. population.

☛ The ***General Social and Economic Characteristics*** reports prepared as part of the 1980 Census identify the number of individuals living in the community who report having a "public transportation disability".

Use of 1980 Census information is suggested because this question about "public transportation disability" was not included in the 1990 Census.

Recent studies have found that while the number of persons reported to have a "public transportation disability" by the census will vary by area, the types of disabilities within this population is fairly constant.⁹ Census information can therefore be used to adjust the general rate of disability by area. For example, if the number of persons identified in the Census with "public transportation disabilities" in your area is 20% higher than the national average, you can assume with some accuracy that the number of ADA paratransit eligible persons is approximately 20% higher than the general estimates provided above. Using this methodology, it is relatively easy to

develop estimates of population by census tract!

Table 7.4 illustrates this method of estimating the population. The national percent of persons reporting a "public transportation disability" - 3.5% - is used to adjust the Census information for each area. Community A, for example, has a lower than (national) average of persons who reported a disability. Community C has a higher percent. The estimated number of persons with disabilities, based on national studies, is correspondingly adjusted to reflect these differences.

☛ Appendix H contains national and state-by-state public transportation disability data from the 1980 Census. Local data will, of course be needed to complete the procedure described above.

Before you can apply these estimates, you will need to know the total population in your paratransit service area. Depending on how you define your service area, this can be a tedious manual process. If you have computer capability, you may find it helpful to purchase a Geographic Information System (GIS) and utilize the

Table 7.4
Adjustment of National ADA Population Information Using Census Data

Area	Total Population Year 19XX	Estimated ADA Eligible Cat. 1 & 3 (1.5%)	Estimated ADA Eligible Cat. 2 (1.0%)	Population Percent from 1980 Census for Persons with Public Transit Disabilities	Weight Factors	Estimate of ADA Eligible Population (Cat. 1 & 3)	Estimate of ADA Eligible Population (Cat. 2)
Community A	50,000	750	500	2.5	$2.5/3.5 = 0.7$	536	357
Community B	150,000	2250	1500	3.5	$3.5/3.5 = 1.0$	2250	1500
Community C	650,000	9750	6500	4.2	$4.2/3.5 = 1.2$	11700	7800
Tract 1	5200	78	52	2.1	$2.1/3.5 = 0.6$	47	31
Tract 2	3300	50	33	4.8	$4.8/3.5 = 1.4$	68	45

Census Bureau's geographic-based files (TIGER files) to map out your bus routes and estimate populations within a given distance of these routes.

☛ A detailed description of GIS applications in transportation is included in *Current Uses of Geographic Information Systems in Transit Planning* (see Appendix K).

☛ Appendix H contains general information about the TIGER files which includes a phone number for further information. Your regional Census Bureau office can also provide assistance. Regional offices also are listed in Appendix H.

If you presently provide paratransit service to other populations, such as the elderly, or if you want to pursue a broader paratransit policy in your area, information on these other populations also should be developed. Local human service agencies probably will have this information readily available. Table 3.1 of this handbook also provides some general information about the expected growth of the older population.

Because your complementary paratransit service will likely be implemented over a

number of years, your population information should include growth projections over the next several years. You can develop estimates using the following information:

- the total population growth projected for your area. This information may be available from your local regional planning council;
- total population growth by age group. If information specific to your area has not been developed, you can apply national projections (see Table 3.1) to your total population growth data;
- the distribution of persons with public transportation disabilities by age. Table 7.5 provides information recently developed by Crain & Associates and the California Department of Finance on the present and projected distribution of persons with transportation disabilities by age. This information is consistent with the estimate made in the 1978 National Survey of Transportation Handicapped People which estimated that 47%

Table 7.5

Changes in Age Composition of Transportation Disabled Persons

Age	Estimated Percent of Population in the Year 1990	Estimated Percent of Population in the Year 2000
< 65	51%	55%
65 - 74	21%	16%
75 +	28%	29%

Source: California Department of Finance and Crain & Associates as presented in San Francisco Bay Area Regional Paratransit Plan, Metropolitan Transportation Commission, November, 1990.

of persons with transportation disabilities were 65 years of age or older.

By knowing the projected growth of the elder and non-elder populations and the distribution of persons with disabilities by age, you can develop projections in the growth of the population of persons with disabilities which factors in age. Factoring age into your projection is important because of the high incidence of disability among older persons.

Using these methodologies will give you a quick way to estimate the population of ADA paratransit eligible persons. Supplementing these calculations with more detailed studies and surveys of your area can, however, produce a more accurate paratransit plan. Even if such studies and surveys cannot be accomplished as part of the development of your initial ADA paratransit plan submitted on January 26, 1992, consider developing additional population information during the implementation period and using this data to adjust and update your plan. Developing population information specific to your area is important because ADA paratransit eligibility is functionally-defined and is related to the service area you select, your local environment, and the complexity of your fixed route system.

☛ ***Planning Services for Transportation-Handicapped People: Data Collection Manual*** (see Appendix K) provides detailed guidance on conducting local surveys.

Also identify accessible housing, community residence programs, independent living centers, work training centers and other origins and destinations that will generate or attract a higher than average number of trips by persons with disabilities as part of this step. Local agencies such as independent living centers, commissions for the blind,

associations for retarded citizens, and mental health agencies can provide you with information about specific disability groups.

STEP 5: Review Service Models and Options

The next step in the process involves reviewing alternatives for providing service.

☛ Fixed route and paratransit service options are discussed in detail in Chapter 6.

This review includes looking at:

- fixed route service options;
- paratransit service models; and,
- possibilities for coordination.

It is recommended that all agencies review Call-A-Lift-Bus and service route options. Route deviation and point deviation services are more applicable in small urban and rural systems. In some rural and small urban systems, replacing fixed route service with a general public paratransit system may even be appropriate, and would eliminate the need to meet the service standards.

Fixed route options also include improvements in related services such as travel training, marketing, driver training, and equipment maintenance that can improve the effectiveness and use of the system.

Paratransit service models include direct operation, brokerage, user-side subsidy, or a combination of these approaches.

Developing specific plans for coordinating with other agencies and providers in your area also is a part of this step. The extent to which other agencies get involved in funding and providing services will be a major factor in selecting an appropriate paratransit service model.

One final note on this step in the process: As will be discussed next, predicting demand for paratransit service is difficult at best. Be sure that the model you select is flexible enough to allow the supply of service to be adjusted if your predictions of demand are too high or too low.

STEP 6: Establish Service Parameters and Milestones

Once population and service information has been collected, you need to work with your consumer advisory committee to develop exact eligibility criteria and service parameters so that demand estimates can be made and costs can be calculated. This step begins the second part of the planning process. In this part, different paratransit alternatives are developed, demand and cost estimates for each are calculated, and the feasibility of each is evaluated.

As indicated by Figure 7.2, a number of service factors will need to be considered. Each of these factors are interrelated and therefore must be considered simultaneously.

For example, the design of the fixed route system will impact trip eligibility.

Accelerating the purchase of accessible fixed route buses or the addition of access features to rail systems will decrease the number of ADA paratransit eligible trips. The introduction of an advance reservation (or Call-A-Lift-Bus) service will make the entire bus system accessible and further reduce reliance on the paratransit system. Travel training programs also will enable individuals with visual impairments or cognitive disabilities to use the fixed route system.

Fixed route system design also will affect paratransit service parameters. A more extensive fixed route system will require expanded complementary paratransit efforts and vice-versa.

Be sure that the model you select is flexible enough to allow the supply of service to be adjusted if your predictions of demand are too high or too low.

If you presently operate paratransit service which is open to more people than the groups defined in the proposed regulation, give careful consideration to your future eligibility criteria. In general, you can:

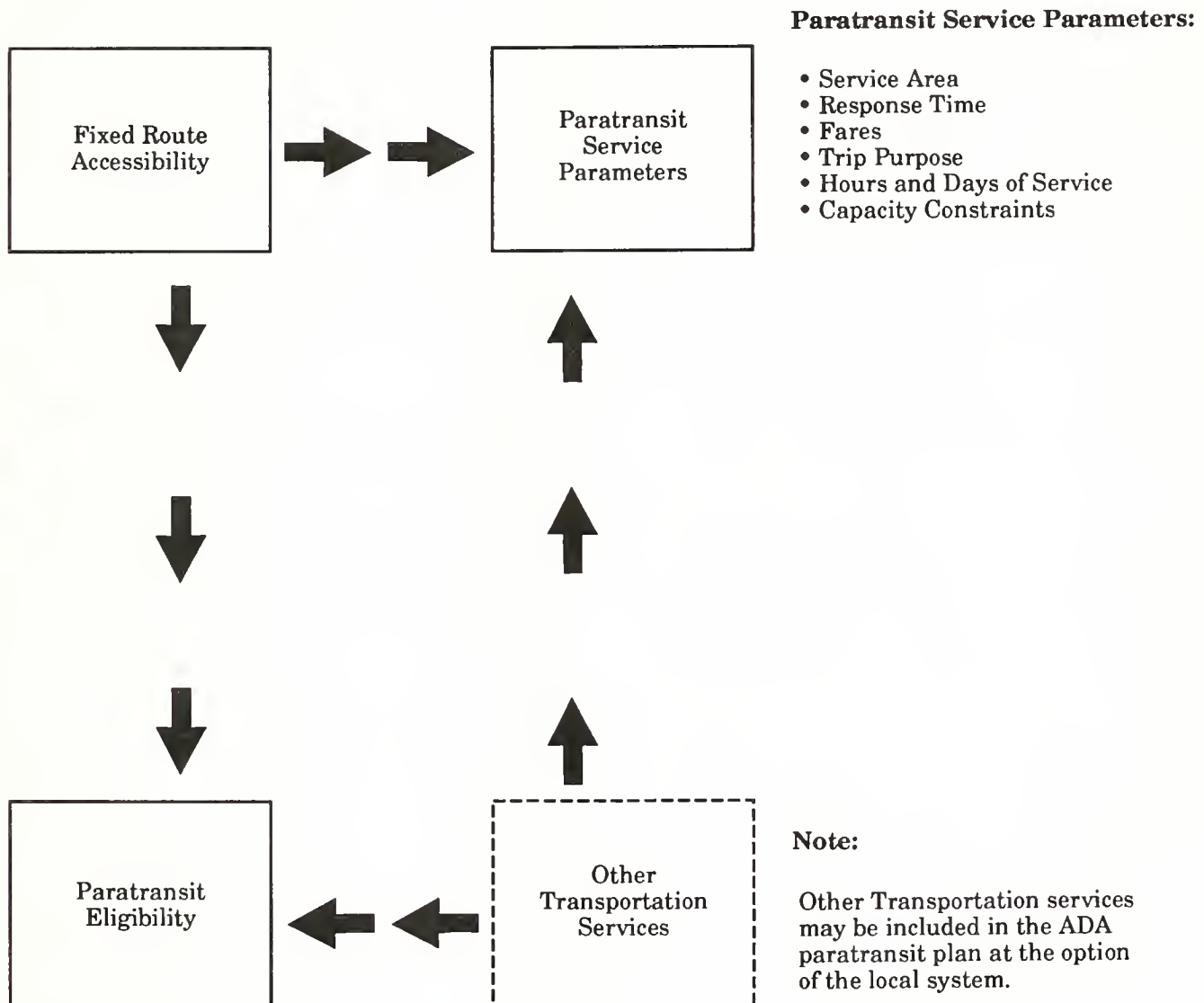
- (1) Restrict paratransit service to only those persons meeting the narrow eligibility standards defined in the regulations. Keep in mind that this option may cause disruptions in the lives of people who have come to rely on your existing service. The availability of alternatives, particularly accessible fixed route service, is an important consideration if this approach is used;
- (2) Maintain or establish a broader eligibility standard but limit the provision of "comparable service", as defined by the six service criteria, to the subset of people who are ADA paratransit eligible; or

- (3) Provide a single, consistent level of "comparable service" to all persons in your area who are "transportation- disadvantaged". In many areas, particularly larger urban areas, the involvement and financial support of human service agencies will make this option more feasible.

Finally, the inclusion of other paratransit services will impact your service design. Because you only need to supplement existing services, coordination will allow you to focus your paratransit efforts on unmet demand.

Identify specific dates (milestones) during the implementation process when each of the six service criteria will be met and when other important parts of the plan will be achieved. ***If your plan will be implemented in more than one year, milestones are a required part of the plan.*** For example, indicate when the service area will be expanded, advance notice requirements reduced, capacity constraints eliminated, important

Figure 7.2
Inter-Relationships of Service Parameters



coordination arrangements initiated, or other facets of the service adjusted to meet the regulations. These milestones will trigger increases (and decreases in the case of coordination) in demand and service cost that will need to be calculated in STEP 7.

Given all of the parameters involved, there will be numerous possible service designs. In order to compare these alternatives, develop several sets of parameters with varying milestones for evaluation in STEP 7. Develop a first set of parameters and milestones that do not exceed the five year implementation period. Also include in this set of alternatives an option which maintains the level of other, non-ADA, paratransit service you are now providing. An initial evaluation of this “total” service will allow you to determine what level of additional funding and/or service cutbacks is needed to comply with the regulations. This information will be vital if you eventually apply for an undue financial burden waiver.

Tables 7.6 and 7.7 provide an example of setting service parameters and milestones based on a hypothetical example. This example is not meant to include all of the potential issues and parameters you may need to address. It does, however, illustrate several important considerations about establishing parameters.

(1) Note that services to elderly persons have been maintained in this example. The level of service to non-ADA eligible riders can, however, be different.

(2) In this example, a decision is made to serve a slightly larger area than is required by the regulations. Communities are included in the service area if a significant portion of the population and area is covered by a service “corridor”. As noted in Chapter 3, this type of decision is a matter of local policy. If an undue financial burden waiver is requested, it will require that a recordkeeping system be established to differentiate between

trips that are in the required service area and those that are not.

(3) Establishing a working group on coordination is set as an early milestone. Because coordination may take time to develop, begin early if you want your efforts to be of benefit within the allowed implementation period.

(4) A brokerage system is used to expand system capacity. As discussed in Chapter 6, brokerage (and user-side subsidy) programs can be used to supplement existing operations. Doing this can make it less critical that you obtain new vehicles each time you want to improve service.

(5) Instituting accessible fixed route bus service before expanding paratransit service area or hours will help avoid the problem of getting riders to use fixed route service after paratransit has been provided.

(6) If you find it necessary to impose capacity constraints, ***do so by design rather than by default***. It will be easier for riders to accept rational constraints developed in a public process than constraints which are unplanned, such as excessive denials, unreliable service, or excessively long trips. Section 37.153 of the regulations requires consideration first of a trip cap per ADA paratransit eligible person if you find compliance with all of the service criteria impossible.

(7) Establish milestones that will bring full compliance as soon as possible. Do not establish milestones based on the maximum implementation period if it is possible to come into full compliance sooner. In the example, compliance is planned within 4 years.

Staged implementation, combined with increased fixed route accessibility and coordination with other agencies should allow you to fully implement complementary paratransit service requirements within the allowed period of time.

Table 7.6: An Example of Setting Service Parameters

Hypothetical Service Information	
<u>Existing Paratransit Service:</u>	Direct operation; service available to elderly persons and persons with disabilities; service available in 2/3 of required ADA service area; hours of operation are Monday - Friday, 9am - 5pm; 2 day advance notice requirement; medical and employment trips given priority; fare is one-half of "single zone" fixed route fare; no contracts with human service agencies.
<u>Existing Fixed Route Service:</u>	Twenty percent (20%) of fleet accessible; accessible buses deployed on a limited number of designated routes; hours of operation are Monday - Saturday, 6am - 10pm and Sunday, 8am - 6pm; no travel training program.

Sample Service Parameters Developed in Cooperation with Consumer Advisory Committee

- Maintain service to elderly persons but give priority in scheduling to ADA Paratransit Eligible individuals. Maintain a medical trip priority for elderly riders. Keep present service hours for elderly riders.
- Set the paratransit fare to be equal to comparable fixed route fare, including zonal increases.
- Define a service area that is slightly broader than that required. Include all areas of a community if more than half of the area and half of the population are within the defined corridors established in STEP 3. Establish data collection procedure for differentiating between eligible and non-eligible trips.
- Use "next day" scheduling in first year. Test immediate response service in year 2 or 3.
- Establish contracts with area providers and supplement direct operation of service with a limited brokerage service in year 1 in order to increase the supply of service prior to the purchase of additional in-house paratransit vehicles. Include taxi providers in brokerage to meet low-productivity, short length trips.
- Establish a working committee with area human service agencies. Consider expanding the first year brokerage during the implementation period to include other human service client needs.
- Institute a Call-A-Lift-Bus program and travel training program for fixed route service as soon as possible in year 1. Explore service route options in years 2 and 3.
- Eliminate trip purpose restrictions for ADA Paratransit Eligible riders in year 1.
- Bring existing service area into compliance with all service criteria in years 1 and 2 before expanding to remaining service areas. Expand hours of operation only after Call-A-Lift- Bus program has been established.
- If capacity constraints cannot be eliminated in the existing area in the first two years, institute limited restrictions to allow service expansion to remaining areas in year 3. If capacity constraints are necessary, they should be trip limits for non-employment, non-education, and non-medical trips. Determine exact constraints through public participation process at that time.

Table 7.7: An Example of Milestones

Jan. 26, 1992:	<ul style="list-style-type: none"> - Implement ADA eligibility determination process. - Solicit proposals for supplemental brokerage contractors. - Establish human service working group
May, 1992:	<ul style="list-style-type: none"> - Begin brokering trips to supplement direct operation. - Eliminate trip purpose restrictions.
June, 1992:	<ul style="list-style-type: none"> - File capital grant request for fixed route bus replacement, additional paratransit vehicles and computerized scheduling/recordkeeping system that includes Geographic Information System (GIS) capability and ability to identify fixed route options as part of the paratransit scheduling process.
July, 1992:	<ul style="list-style-type: none"> - Approval of FY'93 operating budget. Paratransit budget increased to \$____. - Delivery of 10 new paratransit vehicles under previous year grant award. - Prepare RFP for paratransit computer system.
Sept., 1992:	<ul style="list-style-type: none"> - Approval of grant request for fixed route buses, paratransit vehicles, and paratransit computer system. - Delivery of 10 new fixed route buses under previous year grant.
October, 1992:	<ul style="list-style-type: none"> - Award paratransit computer system contract.
Nov., 1992:	<ul style="list-style-type: none"> - Implement Call-A-Lift-Bus program and "peer guide" travel training program.
Dec., 1992:	<ul style="list-style-type: none"> - Expand hours of operation in existing service area. - Install paratransit computer system.
Feb., 1993:	<ul style="list-style-type: none"> - Institute "next day" scheduling procedures. - Increase paratransit fares.
March, 1993:	<ul style="list-style-type: none"> - Develop contract for T.XIX (Medicaid) brokerage and reimbursement. - Begin brokering work training and off-site employment trips for local/state developmental disabilities program.
July, 1993:	<ul style="list-style-type: none"> - Approval of paratransit budget increase to \$____ - Delivery of 10 new paratransit vehicles.
Sept., 1993:	<ul style="list-style-type: none"> - Approval of capital grant request. - Delivery of 10 new accessible fixed route buses. Examine service route options.
March, 1994:	<ul style="list-style-type: none"> - Expand full service to remaining service area. Institute limited capacity constraints, if necessary.
July, 1994:	<ul style="list-style-type: none"> - Approval of paratransit budget increase to \$____. - Delivery of new paratransit vehicles.
Sept., 1994:	<ul style="list-style-type: none"> - Delivery of new accessible fixed route buses.
March, 1995:	<ul style="list-style-type: none"> - Expand brokerage to include other human service agencies. - Test immediate response scheduling.
July, 1995:	<ul style="list-style-type: none"> - Approval of paratransit budget increase to \$____.
January, 1996:	<ul style="list-style-type: none"> - Eliminate remaining capacity constraints. <i>Achieve full compliance with regulation.</i>

STEP 7: Develop Demand and Cost Estimates

Using the population information developed in STEP 4, and the service parameters and models established in STEPS 5 and 6, develop demand and cost estimates for each year of the implementation period.

Forecasting Demand

Table 7.8 provides a summary of the type of population and demand information that is needed. As indicated, separate your estimates for eligible and non-eligible services so that, if it becomes necessary, an accurate calculation of undue burden can be made. Note that demand estimates for persons whose trip eligibility depends on fixed route accessibility (category 2) should be developed separate from those who are eligible in the long-term (categories 1 and 3). Service for persons eligible under category 2 will decline as your fixed route system is made accessible. Developing separate estimates will allow you to factor this into your analysis.

If your system design includes contract service to agency clientele, the elderly, or other populations, develop separate demand estimates for this portion of your program. Work with local human service agencies to determine their future needs for transportation. As indicated in Table 7.8, some clients will be considered ADA eligible.

As shown in Figure 7.3, each of the service parameters set in STEP 6 will affect demand for your paratransit service. Eligibility criteria and the existence of other transportation services will have obvious effects. The success of your fixed route program also will affect ridership on the paratransit system. Attention to marketing, employee training, consumer travel training, and lift maintenance efforts will make fixed route service a more attractive alternative for many potential paratransit users. An advance reservation, or Call-A-Lift-Bus, program

also will promote increased use of the fixed route system.

Implementing each of the six service criteria will also affect demand. Reducing advance notice requirements to "next day" service may increase demand (although the regulatory impact analysis preformed by James F. Hickling Management Consultants indicated that demand does not increase substantially until response time is reduced to 4 hours or less).⁷ Eliminating trip priorities will obviously increase demand, as will increasing days and hours of service, expanding the service area, or eliminating capacity constraints. Changing fares also will affect demand. The analysis performed by Hickling, based on a survey of 160 systems, found that a 10% change in fare could be expected to change paratransit demand by 1.9% to 3.9%.

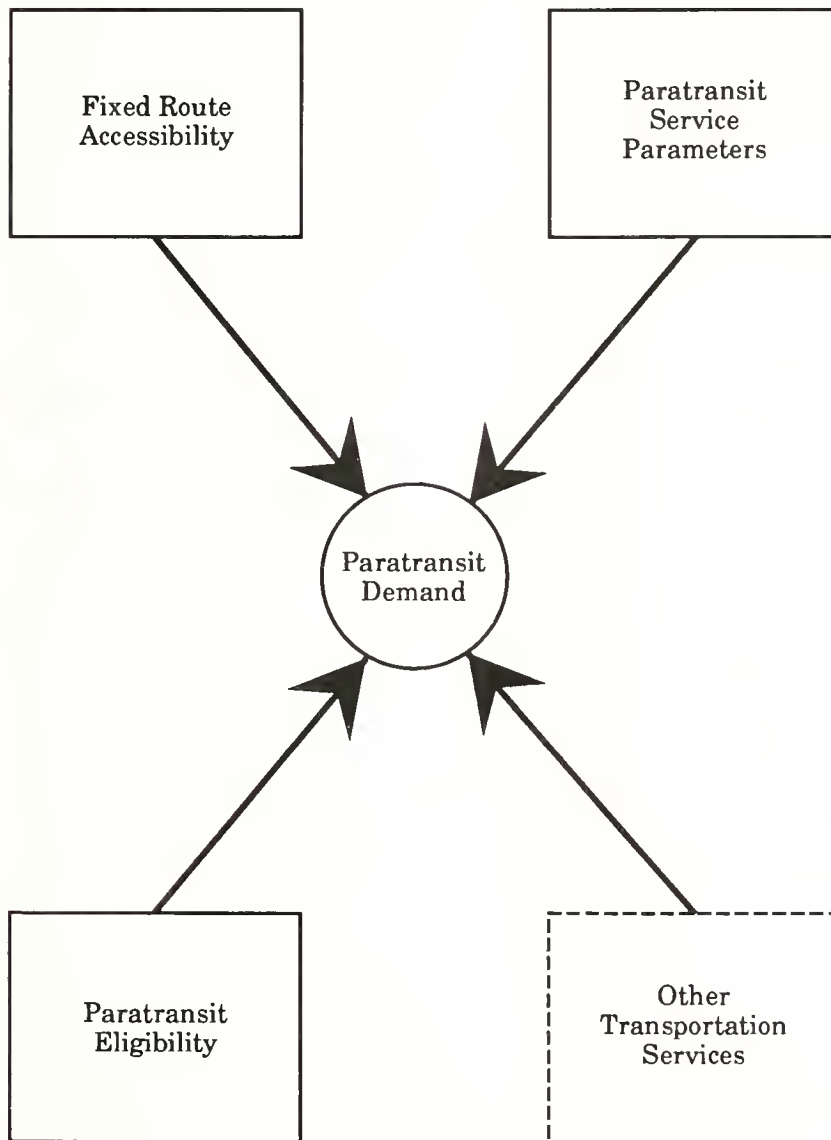
Figure 7.4 offers a methodology for developing demand estimates. Start with the total eligible population estimated in STEP 4. Determine how many of these eligible individuals will apply for and use your paratransit service. This percent will depend on: how well you market your service; what other options are available, including the use of private automobiles and other human service transportation programs; and, the perceived quality of your service (particularly factors such as capacity constraints, advance notice requirements, and trip purpose restrictions). If you are presently operating a paratransit service, you can easily calculate the percent of total eligible individuals who are using your system. If you will be starting a new service, you can base your estimate on the experience of other areas with similar populations and service characteristics. If you are starting a new service, also keep in mind that demand traditionally grows slowly in the first year or two of a program. Many persons will not start using the service until it has a reputation for safety and reliability.

Table 7.8
Summary Chart of Population and Demand Analysis

	Year 1			Year 2			Year 3			Year 4			Year 5		
	Total Elig. Pop.	Persons Cert. for Para-transit	One-Way Trips	Total Elig. Pop	Persons Cert. for Para-transit	One-Way Trips	Total Elig. Pop	Persons Cert. for Para-transit	One-Way Trips	Total Elig. Pop	Persons Cert. for Para-transit	One-Way Trips	Total Elig. Pop	Persons Cert. for Para-transit	One-Way Trips
ADA Para-transit Eligible Persons															
Cat. 1 & 3															
Cat. 2															
Human Service Program Clients															
Elderly															
Persons Not ADA Para-transit Eligible															
Non-ADA-Eligible Persons with Disabil.															
Human Service Program Clients															

Figure 7.3

**Relationship Between Service Parameters
and Paratransit Demand**



Paratransit Service Parameters:

- Service Area
- Response Time
- Fares
- Trip Purpose
- Hours and Days of Service
- Capacity Constraints

Note:

Other transportation services may be included in the ADA paratransit plan at the option of the local system.

Next, you need to determine how many trips this user population makes and what percent of these trips will be made on your system. National studies estimate that persons with transportation disabilities make, on average, 1/4 to 1/2 as many trips as the general population. In numbers, this means between 15 and 33 one-way trips per month.² This number can be expected to change as socio-economic factors change, such as the high rate of unemployment among persons with disabilities. It also will change as the availability of transportation options improves. For your estimates, you can either use national data or develop local trip-making rates by surveying your present riders.

The percent of trips that registered users make on your paratransit system, the "mode split", is the last factor in the methodology. It depends on: the quality of your service; the accessibility of the fixed route system; and, the quality of other travel options. Present mode split can be estimated by dividing the average number of trips on your system per user by the estimated trip-making rate. Mode split can also be determined by surveying existing riders to determine what percent of all trips are made on the paratransit system.

A sample calculation based on 1,000 total eligible persons, 20% of these individuals registered for the paratransit service, a trip-making rate of 20 trips/month, and a mode split of 40% would be:

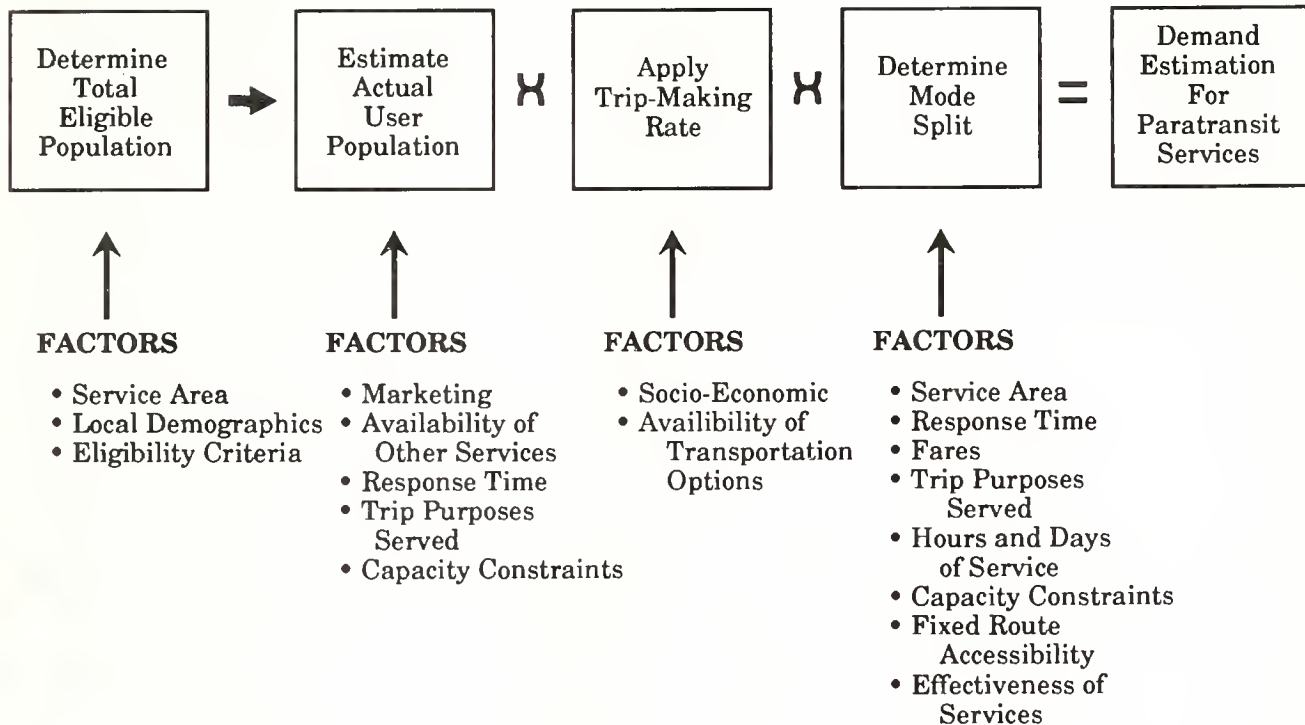
$$\begin{aligned} &(1,000 \text{ persons}) \times (.2) \\ &\quad \times (20 \text{ trips/month}) \times (.4) \\ &= 1,600 \text{ trips/month,} \\ &\text{or 1.6 trips/month for each eligible user} \end{aligned}$$

Present demand can be used to calibrate the model for existing service characteristics. As service changes each year, based on the parameters and milestones set in STEP 6, each factor in the model can be adjusted and changes in

demand predicted. Expanding the service area will increase the total eligible population. Increasing days and hours of service will allow users to make trips at those times on your system and thereby increase your mode split. Expanding hours and days will also affect the trip-making rate by providing a new travel alternative. Eliminating capacity constraints will both encourage more eligible users to register for your service *and* increase the mode split factor. Figure 7.4 lists the service criteria and other factors that are most likely to impact each portion of the model.

An alternative method for estimating demand, if you have limited baseline information, would be to eliminate the estimates of "market penetration" and "mode split" and develop a general trip-making rate for the total eligible population. This approach was used in the *San Francisco Bay Area Regional Paratransit Plan*, a comprehensive plan completed in November, 1990.¹⁰ A "low" estimate of trip-making rate was developed by surveying seven paratransit systems across the country believed to be providing "exemplary" service. This analysis resulted in estimates of 1.0 trip/month per eligible person in urban areas and 1.2 trips/month per eligible person in rural areas. This number of trips was suggested for existing service given capacity constraints and other service limitations. A "high" rate, reflecting potential demand with improved service, was then developed. An estimate of 4.4 trips per month per eligible person was suggested based on information from several demand studies. Using this approach, a demand of 1,000 - 1,200 trips per month per 1,000 eligible individuals could be expected if service is constrained. As many as 4,400 trips per month per 1,000 eligible persons could be expected once all ADA service requirements are met. This maximum demand probably would not be expressed until some time after services are in full compliance and individuals are able to make lifestyle changes.

Figure 7.4
Paratransit Demand Estimation Methodology



Another useful demand estimation procedure involves comparing trips by trip purpose. Table 7.9 shows the types of trips made on several model paratransit services. These systems do not limit trips by trip purpose. If you will be starting a new paratransit program, a distribution of trips similar to this can be expected.

The systems described in Table 7.9 do, however, report capacity constraints. Capacity constraints will cause a higher percent of advance reservation trips to be provided (note the high number of medical trips). More immediate, unplanned trips may not be able to be accommodated. Capacity constraints will also make service less

reliable. Many people may find alternative means for important regular needs such as travel to work.

Table 7.10 shows estimates of the distribution of all trips made by persons with disabilities. Over time, as capacity constraints and trip purpose limitations are removed and response times lowered, you can expect

your service to provide trips more closely resembling this distribution.

Records of unmet trip requests, waiting lists, and other operational data can also be used to predict growth in demand. In smaller systems or systems with established paratransit programs, it may be possible to develop accurate demand

In smaller systems or systems with established paratransit programs, it may be possible to develop accurate demand estimates using existing records.

Table 7.9

Percentage of Trips by Trip Purpose for Paratransit Services¹⁰

Trip Purpose	Spokane	Ben Franklin	Chicago	Milwaukee	Pittsburgh
Medical	34	38	66	19	24
Work	2	0		15	28
Educational	14	9	7	5	9
Shopping/Personal Business	49	14	22	23	23
Leisure/Recreation/Other		39	5	38	16
Total	*100	100	100	100	100

* May not total 100% due to rounding

Table 7.10

Percentage of Trips by Trip Purpose for All Modes

Trip Purpose	New York City ⁸ (Actual Trips)	New York City ⁸ (Actual Plus Latent Trips)	National Study ²
Medical	16	16	11
Work	13	12	18
Educational	6	6	9
Shopping/Personal Business	44	41	34
Leisure/Recreation/Other	22	26	28
Total	*100	100	100

* May not total 100% due to rounding

estimates using these existing records. This information also can be used to adjust national data to your specific situation and double-check the predicted results obtained using the methodologies described above.

Predicting demand is difficult and will require careful and innovative local analysis. Given that predicting demand is an inexact science at best - particularly for a population with a large latent demand - you will need to closely monitor ridership

and make adjustments in your forecasts throughout the implementation period.

Developing Cost Estimates

Once annual demand projections have been made, you are ready to develop cost and funding estimates. You will need to develop estimates for ***operating costs***, ***administrative costs***, and ***capital costs***.

Provider information collected in STEP 1, including unit rates and productivity, will be helpful in developing ***operating costs***.

Table 7.11

Vehicle Productivity by Population Density and Type of Eligibility

Eligibility	Population Density					
	500 persons/ sq. mi.	1000 persons/ sq. mi.	1500 persons/ sq. mi.	2500 persons/ sq. mi.	3000 persons/ sq. mi.	4000 persons/ sq. mi.
ADA Paratransit Eligible persons only	1.39* (0.30)**	1.64 (0.35)	1.80 (0.39)	2.03 (0.43)	2.11 (0.45)	2.25 (0.48)
"Transportation- Disadvantaged" (approx. 5% of the population)	2.02 (0.43)	2.37 (0.50)	2.61 (0.56)	2.94 (0.63)	3.05 (0.65)	3.26 (0.69)

* Average one-way passenger trips per vehicle hour.

** Deviation from the mean.

Source: James F. Hickling Management Consultants. Data compiled from survey of 160 U.S. paratransit systems.

The procedure for estimating annual operating costs will vary depending on the type of operation. In a user-side subsidy program, service is usually purchased by the trip. Cost estimates can be developed by simply multiplying the number of trips expected by the average per trip cost charged by providers. To arrive at an accurate estimate of the cost per trip, providers will need to know what percent of the service will be "group" trips versus individual trips. They will also need to know the service area size and (if possible) the average trip length. This information can be developed from existing service information appropriately changed to reflect your new service design.

For a direct operation, you will need to estimate the hourly cost of operating a vehicle and the expected productivity of the service (defined as the average number of trips that are provided per vehicle-hour of operation). Table 7.11 provides typical productivities developed by Hickling Management Consultants from a survey of 160 demand responsive systems across the country. Productivity is given as a function of **total** population density in the service

area and eligibility for the service. Two options for eligibility are used - strict ADA paratransit eligibility and a broader eligibility including approximately 5% of the total population. With a higher population density and a greater number of potential users, opportunities for grouping trips increase and productivity increases. Using this chart, if your service is open to a broader population and your service area has a population density of 1000 persons per square mile, a productivity of 2.37 trips per hour is predicted. The numbers in parenthesis below each estimate of productivity indicate the possible "deviation from the mean". In the example above, productivity would typically vary from 1.94 trips per hour to 2.8 trips per hour. Given this range, past experience and input from local operators should be used to help estimate productivity for your area.

To calculate the estimated annual cost of service, divide the expected number of trips per year by the estimated productivity. This will give you the number of vehicle-hours of service needed. Then, multiply the annual vehicle-hours of service by the estimated cost per hour.

For example, if the average cost per hour is \$30.00, the estimated annual demand is 100,000 one-way trips, and the expected productivity is 2.5 trips per hour, the estimated annual cost would be calculated as follows:

100,000 trips/2.5 trips/hour = 40,000
vehicle-hours/year

40,000 veh-hrs x \$30/veh-hr =

\$1,200,000

In brokerage programs, service can be purchased from providers by the trip, by the hour, or by the mile. You will need to estimate how many trips will be purchased by each method and then calculate costs as described above.

If you intend to operate your own vehicles, or provide equipment to your operator(s), you will need to estimate the number of vehicles needed and the cost per vehicle (your **capital costs**). To get the number of vehicles needed, divide the estimated number of trips by the expected productivity and then divide by the number of hours each vehicle will be in operation. You would then add a reasonable number of spare vehicles to this figure.

For example, given estimates of 100,000 one-way trips per year, a productivity of 2.5 trips/vehicle-hour, a 10 hour operating day six days per week, and a desired spare ratio of 15%, the number of vehicles needed would be calculated as follows:

100,000 trips/2.5 trips/veh-hr = 40,000
veh-hrs/year.

40,000/52 weeks/6 days

= 128 veh-hrs/day.

128 veh-hrs/10 hrs per vehicle

= 13 vehicles

13 vehicles + 2 spares

= 15 total vehicles.

Information on the cost of vehicles can be obtained from local dealers.

☛ The **Vehicle Catalog** published each year by the Ohio Department of Transportation (see Appendix K), is also an excellent source of cost information for paratransit vehicles.

Additional **administrative costs** can be developed by carefully reviewing the staffing needs associated with the service model selected. Case studies and information from peer systems can be helpful in determining administrative needs and costs.

Evaluating Alternatives

Following the development of alternative system designs and costs, determine if the service proposed is affordable. As shown in Table 7.12, three outcomes are possible. First, the service plan could provide for compliance within the allowed implementation period and be found to be affordable. In this case you are ready to proceed to STEP 8. Second, compliance within the allowed time period could be found to be too costly given the parameters, milestones, and service options selected, but costs and service reductions are not significant enough to qualify you for an undue financial burden waiver. In this case, you should return to STEP 5 and examine alternative service options, parameters, and milestones. Third, you could find that compliance within the allowed time would result in costs and/or reductions in other services that support an undue financial burden waiver request. In this case, return to STEP 5, review service options, develop affordable and acceptable parameters and milestones which extend beyond the implementation period, and prepare a waiver request. As noted in STEP 6, §37.153 of the regulations requires that you "...consider first a reduction in number of trips provided to each ADA paratransit eligible person per month, while attempting to meet all other service criteria."

Table 7.12

Possible Evaluation Outcomes and Required Actions

OUTCOME	ACTIONS
Compliance within the allowed implementation period is affordable.	Proceed to STEP 8. No waiver necessary.
Compliance within the allowed implementation period is not affordable. Costs and service reductions do not support a waiver request.	Return to STEP 5. Examine alternative parameters, milestones, and service options.
Compliance within the allowed implementation period is not affordable. Costs and/or service reductions support a waiver request.	Return to STEP 5. Prepare your waiver request. Include proposed service and alternative plans should waiver be denied.

Be sure to involve your consumer advisory committee in any adjustments of service parameters and milestones, if this becomes necessary.

Keep in mind that in calculating costs for the purpose of applying for an undue financial burden waiver, you can only count the cost of service provided to ADA paratransit eligible individuals required by the regulations. The cost of service to other populations, or service beyond that required by the six criteria (such as covering an extended service area) cannot be included in your undue financial burden waiver calculations.

Also, as noted earlier, before deciding to apply for a waiver, be sure that all service options, particularly any possibilities for coordination, have been examined.

If your service plan involves making changes to the fixed route system, make a special effort to determine the public and political reaction to these changes before proceeding to a public hearing. Fixed route bus constituencies may not have been represented in the advisory process employed to this point.

STEP 8: Develop a Draft Plan for Public Review

The final phase of the process will begin with the preparation of a draft plan for public review. Be sure that all of the required elements of a plan, noted at the beginning of this chapter, are included.

Whether or not you request an undue financial burden waiver will affect the design of your plan. If a waiver is requested, your plan must contain documentation showing that an undue financial burden does or will exist. The level of paratransit service that will be provided if the request is denied also must be included in the plan.

Even if a request for an undue financial burden waiver is included, your plan also must define how and when complementary paratransit service, in full compliance with the regulation, will be implemented. Inclusion of an undue financial burden waiver request does not relieve you from the requirement to plan to provide the required level of service.

Pay particular attention to the physical and communications accessibility of your public hearing. Your draft plan should be available in large print, braille, and tape **before** the hearing. Persons with communications disabilities must have equal time and opportunity to review and comment on the plan.

☛ Section 5 of Chapter 8 of this handbook offers guidance on holding accessible meetings and hearings.

Depending on the public input received, you may need to return to earlier steps in the process to revise your service parameters or look at alternate service models. If comments can be addressed without major revisions to your draft plan, you are ready to prepare your final plan.

STEP 9: Prepare Your Final Plan

A summary of all comments received in the public review process must be prepared and added to the final plan. A discussion of how each of the issues raised has been addressed and resolved also must be part of the final plan.

If your plan includes service in an urbanized area, it must be submitted for MPO review and endorsement. A certification that the plan is in conformance with the transportation plan developed under 49 CFR part 613 and 23 CFR part 450 (the joint UMTA/FHWA regulation) must be included. Several other certifications are also required.

☛ Sample certifications are provided in Appendix C.

8

KEYS TO A SUCCESSFUL
PUBLIC PROCESS

Section 1.

Outreach

Many if not most transportation providers have already established a relationship with some elements of the disability community in their service areas, and may have established a formal relationship with an access advisory group, or with an access subcommittee to its larger

consumer advisory board. If this is the case in your service area, it is important that this group remain involved in the paratransit planning process. Even if this is the case, however, it will be necessary

to review the membership in the committee and to take special steps to include persons with disabilities who may not have participated in the past. The new requirements of the ADA will effect many who have not considered transit to be an option for themselves or may not have been aware of paratransit as an option. Others may simply take such service for granted if it is already provided. Special outreach to the community of persons with disabilities must be undertaken as part of ADA paratransit planning [§37.137(b)(1)].

The beginning of the ADA paratransit implementation process offers an opportunity to review and strengthen such advisory processes. Section 4 of this chapter discusses some ways to develop a productive on-going public process.

The new requirements of the ADA will effect many who have not considered transit to be an option for themselves or may not have been aware of paratransit as an option.

State and local commissions on disability and organizations such as independent living centers, local chapters of the Association for Retarded Citizens, United Cerebral Palsy, Easter Seals, etc., (see the listing provided on the following page), may be involved in this process as important elements in the community. Many older Americans, who might not necessarily identify with the disability

community, will nonetheless be eligible customers of this service and groups such as the local chapter of the American Association of Retired People and local councils on aging

should also be contacted. Organizations serving the parents of children with disabilities and the children of elders with disabilities exist in many communities. Most localities have directories of service agencies that work with people with disabilities, often published by the United Way or Community Chest. These organizations can provide an invaluable source of contacts and may have newsletters or mailing lists that can be utilized to reach persons with disabilities. As part of the planning process, the transit provider already will be in contact with many of these organizations to determine levels of existing service and need.

Table 8.1

**A REPRESENTATIVE LISTING OF
ORGANIZATIONS THAT SHOULD BE INVOLVED IN YOUR PLANNING PROCESS**

- Independent Living Centers and state Independent Living Councils
- State or local disability coalitions
- Associations for Retarded Citizens
- Local community residence programs
- Mental Health Associations or Centers
- Commissions for the Blind and Visually-Impaired
- Commissions for the Deaf and Hearing-Impaired
- State, regional, or local Commissions on Disability
- United Cerebral Palsy Councils
- Paralyzed Veterans Associations
- Local chapters of the National Easter Seals Society
- Local chapters of Americans Disabled for Attendant Programs Today
- Developmental Disabilities Councils
- Vocational Rehabilitation agencies
- Councils on Aging
- Home Care Corporations
- Area Agencies on Aging
- Local chapters of the American Association of Retired People
- Other agencies providing direct services to persons with disabilities
and consumer groups of persons with disabilities

Transit providers should, however, avoid thinking of the community of persons with disabilities as a monolith, or as a collection of social services agencies, each representing a particular disability or need. Such organizations cannot by themselves represent the disability community. Large parts of this population have no relationship with service organizations and their interests may not coincide. It also should be remembered that clients of a particular agency may find it difficult to comment freely on the transportation services on which they have been dependent. Transit providers may wish to establish a goal that most of those involved in the consultative process be individuals with disabilities, possibly but not necessarily representing an organization or constituency. Including these people in the consultative process will have important implications for outreach and the planning of meetings.

Outreach through service agencies must be supplemented by the use of the general media — newspapers, radio and television — to reach a broader population.

Opportunities for involvement in the consultative process outside of normal working hours, evenings or weekends, should be considered: many of the people who will wish to be involved have jobs and would find it awkward to request time-off to attend such meetings. Local access cable television and telephone connection may allow input from persons not now able to leave their homes (persons likely to care very much about paratransit). Even with this accommodation, however, transportation arrangements will need to be made for those who wish to attend the meetings directly. All announcements of meetings, agendas, draft and final paratransit plans — whatever is presented in published form to the public — should be available in alternative media for

persons who are blind or have visual impairments. At a minimum, large print and taped versions should be available; braille versions are most highly valued by some blind individuals. Whenever television is used, provisions should be made for captioning or signing the audio message. A fuller discussion of holding accessible meetings follows.

Section 2.

Developing Trust and Common Goals

The involvement of persons with disabilities in the development of transit services and facilities that will meet their needs is an integral part of the ADA;

Transit providers should avoid thinking of the community of persons with disabilities as a monolith, or as a collection of social services agencies, each representing a particular disability or need.

implementing regulations reflect this legislative commitment. The experience of transit providers that have provided paratransit in the past indicates that such public

participation also facilitates the development of a service that most effectively meets the needs of its customers. Within the parameters established by the legislation and its implementing regulations, these customers will provide the critical input as to what does and does not work, how standards and priorities can be established and in measuring progress in meeting the ADA's goals. A community convinced of your commitment to provide accessible services also can prove an invaluable ally in obtaining the necessary funding for implementation.

It is likely that the implementation of these regulations will involve people who heretofore have not been involved in the transit planning process. Indeed, one of the goals of the ADA is the development of this involvement. A frank history of the provision of transit services to customers with disabilities would reflect a good deal

of suspicion and misunderstanding — and often confrontation — over issues of access. Especially if a transit provider has not provided paratransit service in the past, it may have little or no contact with the population to be served by this new requirement. Where paratransit has provided much or all of the services available to customers with disabilities, implementation of the ADA may be seen as a threat to established levels of service. Expectations raised by the passage of the ADA are tempered by the frustration many customers with disabilities — or would-be customers — have experienced in past dealings with transit agencies. Nonetheless, effective implementation of the requirements of the ADA, as well as efficient delivery of the services it promises, requires that transit providers work to establish new levels of trust in their dealings with the disability community.

Three key factors can help establish mutual trust and ensure a successful public process. These factors are discussed more thoroughly in the sections that follow.

First, all participants should understand the process, its goals and its limitations.

Second, the process must be genuinely consultative. More is expected than just an opportunity to comment on a fully elaborated plan for the provision of paratransit services. Decision-makers need to be open to this input and to have direct involvement with the process as it develops. The regulation requires that consultation begin at an early stage in plan development and involve persons with disabilities in all phases and aspects of the plan's development.

Third, a mechanism for on-going input from the community will help ensure that problems are dealt with early, before they can become embedded in the system and before community dissatisfaction can grow. This will prove particularly valuable as paratransit plans are updated annually. Such an ongoing process is required by the regulation.

Section 3.

Timely and Meaningful Input in the Initial Planning Process

In calling for a collaborative process between transit providers and the disability community, USDOT regulations leave the format to be utilized in the consultation to be chosen locally. More or less formal access advisory committees have been established in a great many localities, and the form of these committees is discussed in the section which follows. Although the deadlines for establishing complementary paratransit may seem quite challenging, it is important to note that the benchmark date of January 26, 1992 involves the submission of an acceptable plan to USDOT and the initiation of its implementation, not the creation of a fully complying paratransit service. The regulation applies this requirement for consultation to the annual updates of the paratransit plan. Compliance with this requirement for consultation will be greatly facilitated by the creation of an established and ongoing paratransit access advisory body. On-going consultation facilitates understanding by both parties and can prevent the annual plan development from becoming bogged down with accumulated grievances.

Whatever venue is chosen for this consultation (a permanent accessibility advisory committee or subcommittee of a larger consumer board, a series of specially called meetings, etc.), it will be essential that the process begin with a full discussion of what the ADA requires regarding complementary paratransit, and of the transit agency's good faith and commitment to meet these requirements at every step of the process. The relationship of these requirements to existing fixed-route and paratransit services should be carefully presented. Understanding of these underlying points will help ensure that the discussion is focused and meaningful. It is inevitable

that at least some of those participating in this process will want to discuss current transit services and their dissatisfaction with them. A mechanism for dealing with these concerns, separate from this process, should be available and announced at these meetings. Participants should, however, be encouraged to focus on what a complying complementary paratransit program will look like in their community and to avoid discussions merely of what is wrong with currently available services. A trained facilitator well-regarded by all elements of the community may prove helpful to that end.

The initiation of this public process provides an important opportunity for the transit provider to articulate, from the highest levels of the organization, the commitment to achieve full compliance with the ADA. Attendance by the chief executive and/or members of the corporate board of the provider will help demonstrate that commitment to the community. Such participation will also inform senior personnel of the issues surrounding paratransit and will send an important signal throughout the organization of the significance attached by management to this process and to compliance with the ADA.

It also can be expected that this discussion will go beyond the kind of complementary paratransit required by the ADA. The ADA sets a minimum level of required complementary paratransit service while encouraging the widest possible availability and use of accessible fixed-route services. As noted elsewhere, the ADA is not meant to preclude a wider paratransit service if this meets the needs of a particular locality. Transit providers

may wish to consider these other needs even as they ensure compliance with the ADA's minimum standards.

Ideally, this initial discussion will be reflected in a draft plan for ADA compliance which would be discussed at subsequent meetings. Planners should be prepared to explain at this meeting why specific suggestions were not included in the plan and how the alternative approach chosen will meet a particular need. If a plan relies on the utilization of existing paratransit services, it is essential here to demonstrate how these services meet their mission: the customers of these services will have much to say on this point. It is also important to make clear that the

The initiation of this public process provides an important opportunity for the transit provider to articulate, from the highest levels of the organization, the commitment to achieve full compliance with the ADA.

development of complementary paratransit is a process that will occur over time to a set of specific goals and timetables. The selection of these benchmarks and

service standards is an important element for consideration in the consultative process and may alleviate the need for a request for an undue financial burden waiver. If such a waiver request is planned, the details of its scope and duration should be thoroughly assessed and explained.

A final draft plan reflecting this input must be the subject of a public hearing [§37.137(b)(4)]. Opportunity for public comment other than through the occasion of the public hearing is also required [§37.137(b)(2)]. The plan will need to be available in alternative media (large print, braille and tapes) for the blind and visually impaired and well advertised in general circulation and specialized publications and broadcasts.

Section 4.

Creating an On-going Consultative Process

The regulations adopted by USDOT do not specify the structure of the consultative process which is required to take place in the planning process for paratransit and other accessible services. This is appropriately a local question, to be determined within the context of the provider's overall relationship with the disability community. Many transit providers already have in place some form of access advisory process and certainly that process should be used here so long as special steps, described in the sections

above, ensure that the necessary outreach for this particular purpose has taken place. If an access advisory committee exists, the

consultation described above could take place through its auspices, with a special meeting or part of the meeting set aside for discussion of ADA-related paratransit issues. If such an advisory committee does not exist, transit providers may find this a useful time to establish such a body.

The on-going requirement for consultation in USDOT regulations as well as the obvious interest of all parties in achieving an effective and efficient paratransit service, suggests that a formal access advisory committee be established. Where a larger customer service advisory committee exists, it may be useful that this group be a subcommittee of the larger group. In any case, the paratransit committee should be truly representative of the users of the service and open to participation by the public. Appointed committees, named by the transit provider, may be inclined to represent organizations more than consumers and can place the provider in a difficult political thicket. A more open arrangement, nonetheless providing structure for its process, may be more

useful in meeting the needs of the community and the transit provider.

It must be expected that the consultative process will grow and evolve as time goes on. Where no such process currently exists, the arrangements made for this consultation will necessarily be interim, and should be acknowledged as such. The chairperson or staff member of a state or local office on disability (handicapped affairs, etc.) might appropriately serve as an acting chairperson or facilitator in the early stages of the consultation. The requirement that a workable paratransit plan be submitted by January 26, 1992 means that the final development of a more formal consultative body, with an

elected chairperson, may best be put off for a short period of time. It is important, in that case, that the interim nature of this

A structure whose membership is self-selecting will, in the long term, probably prove the most viable.

arrangement is clearly stated so that the process of consultation regarding paratransit can move forward. For now, the goal should be to be inclusive of all who wish to participate with the clearly stated goal of timely production of a workable paratransit plan.

A structure whose membership is self-selecting will, in the long term, probably prove the most viable. In smaller communities, simply showing up for a well-advertised meeting may be enough to allow participation in all the processes of the committee. A committee with defined membership and leadership can, however, prove an important asset in achieving common goals. Some established access advisory committees define as a member any individual who has attended three monthly committee meeting within the last year; such members can vote on policy recommendations and for an executive committee. The long-term structure of an access and/or paratransit consultative committee, its membership, and its formal relationship to the transit provider are themselves natural parts of the planning

process and the paratransit plan and should be addressed as such.

Establishing a formal relationship can be achieved by developing a "Memorandum of Understanding" (MOU).

☛ A sample MOU used by the Massachusetts Bay Transportation Authority (MBTA) in Boston and other regional transit authorities in Massachusetts, is provided as Appendix I.

Section 5.

Holding Accessible Meetings and Hearings

A truly accessible, barrier-free meeting is not difficult to arrange, even for the first time, and will contribute greatly to establishing a sense of the transit provider's good faith from the start of the process. Successful access does, however,

require attention to detail. Specific accessibility standards such as doorway widths and ramp slopes are not included here but can be found in the Access Board (ATBCB) standards that are incorporated as Appendix A in the USDOT final regulations. Even if you use a facility that has been utilized for meetings of persons with disabilities in the past, do not take it for granted that the facility is fully accessible. Many buildings can be used by persons with disabilities, if only uncomfortably, even though they could not be called accessible. An on-site preview of the meeting place should certainly be conducted. Attention to the true accessibility of your meeting place will help ensure safe and productive meetings for all participants.

An accessibility checklist is provided as Table 8.2 on the following page.

Table 8.2

AN ACCESSIBILITY CHECKLIST FOR MEETINGS AND HEARINGS

Have meeting notices been published in several formats so that those with communications disabilities - the deaf and hard of hearing, the blind and visually impaired - know about the meeting?	
Has all published material been made available in a timely way in alternative media: large print, taped and braille?	
Have arrangements been made for transporting those with disabilities, using available fixed route and paratransit vehicles?	
Have extra parking spaces for persons with disabilities been set aside at available lots or garages?	
Is the accessible route to the meeting clearly designated and marked?	
Are the primary entrances to the meeting place accessible, not requiring persons with disabilities to use rear doors or circuitous routes? If inaccessible entrances to the meeting place exist, is there signage directing persons with disabilities to an accessible entrance?	
Have sign language translators and oral interpreters been engaged to make the proceedings accessible to persons with hearing disabilities?	
Are sound amplification systems such as FM amplifiers and receivers and induction loops available to improve the quality of verbal communication?	
If there is fixed seating in the meeting place, is there sufficient space throughout, and particularly near the front of the room, for persons using wheelchairs?	
Is the air circulation system in the meeting place adequate to reduce the effects that foreign substances may have on persons with environmental illnesses?	
If microphones are being used, are they at appropriate heights for both persons using wheelchairs and ambulatory individuals?	
Are drinking fountains, rest room facilities and public telephones accessible to persons using wheelchairs?	
Are public telephones accessible to persons who use wheelchairs and those with hearing impairments: are an adequate number of phones amplified and is at least one phone equipped with a TDD?	

9

Implementing the Plan



This chapter offers guidance on the implementation of complementary paratransit service programs. Three important aspects of operation - scheduling, training, and vehicles and equipment - are discussed. Suggestions for ongoing evaluation of services and updating of paratransit plans also are provided.

Section 1.

Scheduling and Dispatching

Scheduling and dispatching are a crucial part of paratransit operations. Schedulers and dispatchers must make rapid decisions based on complex sets of known and unknown variables. A balance must be maintained between the quality and level of service and system efficiency and productivity.

ADA complementary paratransit requirements will add an additional level of complexity to this function. As the fixed route system becomes more accessible, schedulers will need to have full knowledge of fixed route travel alternatives. More exact geographic information also will be needed.

While schedulers may have had a general idea of the location of origins and destinations based on street names, they now will need to know precise distances from origins and destinations to fixed route transit stops. This information will be needed to determine if individual trips can be made on the fixed route system given the rider's particular disability.

More detailed rider information also will need to be readily available. Eligibility limitations will have to be known and

applied to specific trip requests. Extremes in weather also will have to be considered in conjunction with rider needs.

In addition to efficiently assigning trips to vehicles, schedulers will be making complex decisions on trip eligibility. Depending on an individual's disability, they will need to ascertain if the person can get to and from transit stops, if accessible fixed route service is available for the trip, and if the person can use the fixed route alternative including any transfers that may be required. Given the complex nature of the job and the potential consequences of discriminatory trip eligibility decisions, a system of checks and balances is recommended. For example, have a second person check all trip denials given to ADA paratransit eligible persons to be sure that appropriate fixed route alternatives exist. Give particular attention to any subscription requests that are made by eligible individuals. If denied, allow the

Given the complex nature of the job and the potential consequences of discriminatory trip eligibility decisions, a system of checks and balances is recommended.

individual to appeal the scheduling decision to a third party. You also may want to periodically check trip records to be sure that schedulers are not

overcompensating and providing paratransit service when fixed route alternatives exist.

Methods of Scheduling

While many different methods of scheduling have been developed, there are three general types of systems that are used. Most methods of scheduling are a variation of one of these general types. Each has its advantages and disadvantages as described below.

Advance Reservation/Call-Back Systems. Under this system, riders call the reservation center in advance of their desired travel time and place a request for service. Requests are sorted by day (and in some cases by time). One or two days before the day of service, vehicle schedules are developed based on the requests received and any subscription lists that are maintained. Once vehicle schedules have been developed, riders are called-back (usually the day before service), trip requests are confirmed, and pick-up times are given. Typically, a maximum advance notice is also specified (for example, requests will be taken no more than 14 - 30 days before the trip). Many programs also will take requests on a "space available" basis even after schedules are developed.

Some modifications to this type of scheduling procedure will be needed to meet the regulatory requirement for "next day" service. Trips can still be reserved days in advance and schedules can be developed a day or two in advance of the day of service. However, other trip requests, placed up to the close of business on the day before service by persons who are ADA paratransit eligible for trips that are eligible, will have to be accommodated **on an equal basis**. Meeting these requests on a "space available" basis after a specified cut-off time is not permitted. Such a procedure would make these trips less likely to be scheduled and would not provide for true next day service. Requests made on the day of service could still be accommodated on a "space available" basis, however, without violating this requirement.

A major disadvantage of this method of scheduling is that riders do not receive trip confirmations until call-backs are made. In systems that are severely capacity constrained, riders are often denied service on the day before their planned trip. To protect against last minute trip denials, users often search for other travel alternatives after placing

their trip request with the paratransit service. High cancellation rates are often reported by paratransit systems that use this method of scheduling. The removal of capacity constraints in response to the regulation will diminish this concern (at least for ADA eligible trips). Call-backs will eventually serve primarily to communicate exact pick-up times rather than to confirm or deny these trip requests. Call-backs to confirm trips may still be needed, however, if it is not possible to determine whether or not trips are eligible at the time they are received.

Another disadvantage of this method is that the functions of scheduling and recording trip requests are usually separated. Direct communication between the scheduler and the rider, which is often helpful in negotiating alternative trip times that are acceptable to the rider, is cumbersome.

The major advantage of this method is that most trip requests are known before vehicle schedules are created. This allows for the development of efficient routes and permits more exact pick-up times to be given to riders. As noted above, though, efficiently planned vehicle routes can become inefficient if there are a significant number of cancellations.

Advance Reservation/Immediate Confirmation Systems. Similar to the first method noted above, riders place requests in advance. Again, a maximum advance reservation period is typically specified. Unlike call-back systems, vehicle schedules are developed over time as requests are received rather than at one time after all requests have been made. Requests are confirmed as they are placed. Call-backs are made only if there is a significant change to the schedule. Communication with the rider at the time that trip requests are made also makes minor adjustments possible that can increase vehicle productivity.

Because not all requests are known at the time that trips are confirmed, riders are

asked to be ready a certain amount of time before and after the scheduled pick-up time (typically 10 to 30 minutes). If you use this method of scheduling, be sure that the "window" of time used for pick-ups does not result in unreliable service that could be construed as a capacity constraint. A possible variation on this method that would reduce this inconvenience would be to combine immediate confirmation with call-backs to give riders more exact pick-up information.

This method works best if the scheduler has experience in predicting the demand for service and is able to envision how each vehicle schedule should be developed. It is also more appropriate in small urban and rural areas where the number of vehicles in any given part of the service area is limited and individual vehicle schedules are therefore easier to predict. Pre-scheduling subscription trips also helps to define vehicle tours.

Given the added complexities of ADA eligibility, paratransit systems which use this type of scheduling will need to provide schedulers with immediate access to detailed rider information and fixed route information.

Fully implemented ADA complementary paratransit services which provide "next day" service will likely employ a scheduling method which combines the two systems described above. Determining trip eligibility will be the first scheduling task. If adequate information is available, eligible trip requests could be confirmed as they are placed. Call-backs would then be used to notify riders of exact pick-up times. If it is not possible to quickly determine trip eligibility, a call-back system could be employed to notify individuals of accessible fixed route alternatives for their travel needs. These call-backs could be made as soon as

eligibility is determined (if a trip request is made days in advance, it would be helpful to the rider not to wait until the day before service to make these call-backs).

Immediate Response Systems. Unlike the above two systems, this method of scheduling does not require advance reservations. Trip requests only need to be made a reasonable period in advance of the desired pick-up time. As requests are received, the scheduler assigns them to an available vehicle in the area. Immediate response scheduling is used by many user-side subsidy programs which utilize taxicabs. Some advance reservation paratransit operations also use this method of scheduling for return trips if the pick-up time on the return trip needs to remain flexible.

Immediate response scheduling offers the highest level of service to riders and a response time most identical to fixed route service. Studies indicate that immediate response scheduling can be done in urban areas without affecting vehicle productivity.

While requests do not need to be made in advance, reservations made in advance can be accepted. It is often convenient for riders to make travel arrangements when appointments are made or trips are planned

rather than to wait until the day of service. These requests simply need to be recorded, recalled on the day of service, and scheduled along with other requests that are received.

This type of scheduling is most appropriate in urban areas with a high level of demand, where average trip distances are relatively short, and where the density of vehicles in the service area is high. Achieving reasonable vehicle productivity is possible under these conditions without grouping rides.

Immediate response scheduling offers the highest level of service to riders and a response time most identical to fixed route service. The flexibility offered by this method of operation is much more conducive to the many unscheduled travel needs that make up a large part of daily

life. You should look carefully at this type of scheduling to see if it can work in your area for all or part of your paratransit program. Try scheduling return trips using this method or conduct a limited demonstration during weekend hours.

Studies indicate that immediate response scheduling can be done in urban areas without affecting vehicle productivity. Demand for service will increase, however, with advance notice requirements of less than four hours. If you decide to test or adopt this method of scheduling, plan in advance to accommodate this extra demand.

Computer-Assisted Scheduling

Computerization in paratransit operations has become widespread with the availability of low-cost, powerful microcomputers. Numerous software packages exist which can assist with one or all of the following tasks:

Recording Rider Information. Most programs include a client file which contains important information about the rider. Detailed eligibility and disability information as well as location relative to fixed route services can be added easily to these files. By computerizing this information, it becomes readily available to schedulers and dispatchers.

Recording and Routing Subscription Trip Requests. Again, most programs allow you to enter and periodically update ongoing, or subscription, trip requests. Lower-cost software packages ask you to assign a subscription trip to a specific vehicle when the request is entered. Some programs will evaluate and offer daily routing changes to obtain the most efficient schedule.

Recording and Routing Non-Subscription Trip Requests. Lower-cost packages will display vehicle schedules, including any subscription requests that have been added, and allow you to select the most appropriate vehicle. More expensive packages will suggest

vehicle assignments based on existing schedules and any service conditions (such as maximum travel time, pick-up or drop-off "windows") which you have specified.

Routing of Vehicles. As noted above, many computer programs integrate routing with other functions. Some programs are available, however, which provide routing assistance as a separate function. These types of programs are particularly helpful in periodically evaluating subscription trip assignments.

Developing Reports and Billings. Fully integrated software packages, which combine rider records with trip requests, allow you to edit schedules for cancellations, no-shows, etc. and to then generate reports and invoices. Detailed reports and cross-tabulations are possible which can be invaluable in planning and service evaluation.

Computerized recordkeeping is possible even if scheduling is not fully automated. Simple relational database software can be used to create a file of completed trip information, to relate trips to rider records, and then to generate service reports and invoices for funding agencies.

Advanced Geo-Based Computer Scheduling Systems

A few scheduling programs have been developed which are geographically based. These programs integrate street networks such as the Census' TIGER files into the scheduling process. They are capable, therefore, of combining fixed route bus information and exact distances from stations/stops with paratransit scheduling.

☛ A recent report, titled ***Advanced Public Transportation Systems: The State-of-the-Art***¹¹, describes one such system used by taxi contractors to the Metro-Dade Transit Agency in Miami, Florida.

A second system is being developed for use by Tri-Met in Portland, Oregon. The

Tri-Met system is particularly relevant. When fully operational, it will look first at client registration information to see if the person is registered for and eligible for paratransit service. It then will check the client's address in relation to accessible fixed route bus service to determine if fixed route service can be used for the complete trip or if feeder service is possible.

☛ An excellent source of additional information about both public domain and proprietary software that is currently available for paratransit operations is the PC-TRANS Resource Center at the University of Kansas Transportation Center.

Information about PC-TRANS and a table summarizing currently available software based on their most recent catalog - *PCs in Transportation Software Directory* is provided in Appendix J.

Section 2.

Employee Training and Public Information

Employee Training

Quality paratransit service cannot be provided without a thorough employee training program. Training is important at all levels - for board members, employees in administration, and those in operations.

Involving persons with disabilities and local disability groups and agencies in the development of employee training programs is **strongly** recommended. Invite organizations to review material you have developed or obtained. Make sure to get input on all types of disabilities. Independent Living Centers, which provide cross-disability services, can be particularly helpful. Associations for persons with vision, hearing, or cognitive impairments can offer suggestions for those particular disabilities.

Union involvement in the development of training programs is recommended also. Increased awareness of disability issues among union representatives can help avoid resistance to any work rule changes that may be necessary. Unions also can be an important ally in efforts to ensure that employees properly follow operating procedures.

Following is a list of seven recommended types of training:

(1) Provide all employees and board members with an understanding of the ADA and related regulations. It is important that all persons understand the goals of the law and the responsibilities that your agency now has. The first several chapters of this handbook can be used to provide this instruction.

☛ The National Easter Seal Society (Project ACTION) in cooperation with the American Public Transit Association (APTA), the Community Transportation Association of America (CTAA), and the International Taxi and Livery Association (ITLA) plan to sponsor a series of workshops in the Fall of 1991 to offer training on ADA requirements.

Table 9.1 provides a workshop schedule. To contact these organizations, see Appendix K.

Training is important at all levels —for board members, employees in administration, and those in operations.

(2) Provide all employees with instruction on the general operating

procedures and plans that you have adopted for your particular service. Explain your plans for meeting the complementary paratransit service requirements of the ADA and how these plans relate to other services you may be providing.

(3) Train all employees to understand the different abilities of persons with disabilities. This training is important as a way to change the stereotypes and discriminatory attitudes that people in your organization may have.

Table 9.1:
Project ACTION/CTAA/APTA/ITLA Workshops

Dates	Location
November 14, 1991*	Las Vegas
November 17-18, 1991	Chicago
December 8-9, 1991	Seattle
December 8-9, 1991	Atlanta
December 15-16, 1991	Washington, D.C.

* In conjunction with the ITLA Annual Convention and Trade Show.

☛ As part of the Rural Transit Assistance Program (RTAP), a multimedia training module titled "Understanding the Capabilities and Needs of Special Passengers" was prepared and several copies distributed to each state RTAP program manager. Copies are also available (for \$80.00 per copy) by calling 1-800-527-8279.

(4) Provide drivers, schedulers, and dispatchers with more detailed training in understanding disabilities, the various types of mobility aids that riders will be using, and in providing assistance to riders.

☛ **Passenger Assistance**

Techniques, a training manual and course of instruction developed by Transportation Management Associates, has become the standard in the industry for this type of training. Your state RTAP Program Manager can assist you in getting information about this course, and other similar programs.

(5) Be sure that drivers, dispatchers, and schedulers are versed in the *specific* as

well as general operating policies of your program. Develop *written* policies which address travel by companions, "no-shows" and service denial guidelines, levels of assistance to be provided, guidance on transfers, and other key issues. Prepare a "Driver's Manual" or more general "Operations Manual" that includes these written policies and provide a copy to each driver or employee.

☛ Paratransit operating policies are discussed in UMTA/RTAP Technical Assistance Brief Number 3, titled ***Special Policies for Special Passengers***. Copies are available through the CTAA (see Appendix K).

(6) Provide drivers and mechanics with instruction in the safe and proper use and maintenance of access related equipment. Tailor this instruction to the specific requirements of your lifts, ramps, securement systems, public address systems, and other accessibility equipment. Develop this training in close cooperation with equipment manufacturers.

(7) Instruct drivers and dispatchers in handling emergency situations and in proper vehicle evacuation techniques.

☛ A training package called ***Evacuating Elderly and Disabled Passengers from Public Transportation Vehicle Emergencies*** was recently prepared with UMTA funding by Senior Services of Snohomish County, Everett, Washington. Copies are available by calling Senior Services at (206)355-1112.

The above recommendations are intended, of course, to be offered in addition to training in other areas such as defensive driving, first aid, CPR, handling accident and other incidents, or passenger relations which you may now be providing.

☛ The UMTA RTAP National Program recently released a third edition of ***Training Resources Catalog for Rural and Specialized Transit Systems***. This catalog provides the latest information on training packages, audiovisual material, and publication. Copies of the catalog can be obtained by calling the National Resource Center at (800)527-8279.

Rider Information

In addition to employee manuals, develop a "Rider's Manual" for users of your paratransit service.

Include in this manual a summary of service policies covering issues such as transfers, no-shows, companions, attendants, subscription service, and accommodation of mobility aids. This manual also can include detailed information about using the service including advance notice requirements, service area, days and hours, and fares.

Service can be provided more efficiently and with fewer complaints if riders know what to expect and what is expected from

them.

Also work with local agencies to develop public information about the ADA and your particular service. Current and potential riders may have many misconceptions and unrealistic expectations about the service that is required by the ADA. Human service agencies can help by notifying their clients and by joining with you to sponsor public information campaigns.

☛ A good source of information about outreach and public information is the National Easter Seal Society's Project ACTION office. They can be reached by calling (202)347-3066 (Voice), or (202)347-7385 (TDD)

Section 3.

Vehicles and Equipment

As you obtain new vehicles for use in your complementary paratransit service, be sure that your specifications comply with all of the standards included in the regulations. These ADA Accessibility Specifications for Transportation Vehicles are contained in Part 38 of the USDOT regulations.

Many of these standards, such as lift platform size, design weight, and emergency back-up systems, are fairly common in the industry. Most current

manufacturers will be able to meet these specifications. Some of the standards, however, such as the performance standard for the lift platform barriers (or end gate) are not common in the industry. Only certain

select companies have designed ***and tested*** their products to this standard. It is therefore recommended that you not only include the actual standards in your specifications but also ask bidders to certify that their lifts (or securement systems) have been tested to meet the

...work with local agencies to develop public information about the ADA and your particular service. Current and potential riders may have many misconceptions and unrealistic expectations about the service that is required by the ADA.

ATBCB standards. Until you become familiar with a company's product line, you also may want to review copies of the test results.

The regulatory requirement that you accommodate all types of mobility devices within certain size and weight limits suggests the use of floor-mounted belt securement systems. Several manufacturers presently make belt systems which meet the regulatory standards. Again, require that equipment be tested. In addition to the ADA standards, a common performance specification used is to require that securement systems be tested to meet the "30mph/20g standard" developed at the University of Michigan.

While belt systems are versatile and provide excellent securement, they will require special driver training. These systems can be unsafe if belts are not attached and tightened properly. Also, given the number of belts that are usually involved, it is recommended that your vehicles be equipped with belt cutters to facilitate emergency evacuation.

- ☛ Revised "guideline specifications" for lifts and securement systems are being prepared by UMTA. These specifications, which will incorporate ADA standards, will be available in the fall of 1991.

There are many other good sources of technical assistance on vehicle and equipment specifications. Because the ADA standards are new, however, past reports and specifications should be carefully checked for compliance with Part 38 of the regulations. General vehicle specifications are available through the RTAP program.

- ☛ The National Resource Center, cited above, maintains current copies of proven specifications for a variety of different sizes and types of vehicles. CTAA and APTA (see Appendix K for addresses and phone numbers) also can provide you with technical assistance

about vehicles, lifts, and securement systems. A number of good publications on small transit vehicles are also available and are listed in Appendix K.

Section 4.

Ongoing Evaluation

Equally as important as developing a good initial paratransit plan is a process for monitoring and evaluating service and adjusting your original plan and estimates. Accurately forecasting demand for service is difficult. Much of this demand is unexpressed, latent demand. Baseline trip information on which to develop estimates may not exist. Adjustments in your estimates will need to be made using actual service information. Predictions about the actions of other transportation providers cited in your plan and the level of funding available for your service also will likely need to be adjusted as you implement your plan.

Table 9.2 suggests a number of service statistics that can help you monitor and evaluate your paratransit service. Those that are marked with an asterisk are more difficult to collect (unless your service data and client records are computerized). You may want to consider periodically sampling your records to develop estimates for these items. Appendix F includes a methodology for developing estimates that are statistically valid. Other statistics, not marked with an asterisk, should be collected monthly.

Tracking the number of trips denied, missed, or provided late will help you understand the level of capacity constraints that remain in your service. As explained in Section 2 of Chapter 5, you should develop definitions of "late trips", "missed trips", and trips that are "denied" in cooperation with your consumer advisory committee.

A detailed analysis of unmet trips requests, in particular, can be helpful. Tabulate unmet trips for ADA paratransit

Table 9.2:
Suggested Paratransit Service Statistics

Monthly Trip Statistics:

Total one-way trips requested	_____
Total one-way trips scheduled	_____
Total unmet trip requests	_____
*Unmet ADA paratransit eligible requests	_____
*Other unmet requests	_____
Total one-way trips canceled	_____
Total no-shows	_____
Total one-way trips provided	_____
*Subscription trips	_____
*Non-subscription trips	_____
Missed trips	_____
Late trips	_____

Monthly Service Statistics:

Total vehicle-hours of service	_____
Total vehicle-miles of service	_____
Productivity (trips provided/vehicle-hours)	_____
Average trip length (trips provided/vehicle-miles)	_____

***Trips by Type of Rider:**

Total one-way trips by ADA-eligible riders	_____
Total one-way trips by non-ADA riders:	_____
Trips by elderly riders	_____
Trips by agency clients	_____
Trips by others	_____

***Trips by Area:**

Trips originating in community A	_____
Trips originating in community B	_____
Trips within ADA service area	_____
Trips outside the ADA service area	_____

***Trips by Trip Purpose:**

Employment	_____	Education	_____
Shopping	_____	Medical	_____
Social/Recreational	_____	Nutrition	_____
Personal Business	_____	Other	_____

***Unduplicated Riders:**

ADA-eligible riders	_____	Avg. trips/month	_____
Non-ADA riders	_____	Avg. trips/month	_____
Elderly	_____	Avg. trips/month	_____
Agency client	_____	Avg. trips/month	_____
Others	_____	Avg. trips/month	_____

* Items that are difficult to collect manually and can be developed through sampling.

eligible and non-ADA paratransit eligible riders. Review unmet trips by time of day, by day of the week, and by area. This will help you identify when and where the most serious capacity constraints exist. It will also help you identify times when subscription trips may be causing the schedule to be "closed" to other requests.

Recording the number of cancellations and no-shows will help you evaluate the effectiveness of your scheduling system. As discussed previously in this chapter, certain types of scheduling procedures can increase the number of cancellations and no-shows. Recording this information also will let you know if the incentives and disincentives you use to reduce no-shows are effective.

Delineate between subscription trips and non-subscription trips provided to ADA paratransit eligible riders. Periodically review the mix of trips by time of day to determine if subscription service exceeds 50% of the total.

Collecting information on trips by type of rider is important for two reasons. It can help you adjust your demand estimates. It also will enable you to calculate those costs associated with the provision of ADA-required service. This information will be important if you have to apply for an undue financial burden waiver.

Determining the number of trips wholly within the ADA-service area is only necessary if you may need to request an undue financial burden waiver and have elected to provide service in a larger area than that defined by the regulation.

Trip purpose information can help with demand projections. Social, recreational, and personal business trips will increase as response time is reduced and as

capacity constraints or trip purpose limitations are removed. The number of employment trips also can be expected to increase as the provisions of the ADA are implemented. The mix of trips by purpose will tell you if advance reservations are too large a percent of your service. If a relatively small number of trips for social, personal business, or other such needs are being provided, you may need to examine your advance reservation policy.

Finally, periodically counting the number of unduplicated riders by type and calculating the average number of trips per registered rider can again help you with your demand estimates. It can help you revise your estimates of "market penetration" (the percent of eligible persons registered for your service) and the "mode split" (the number of trips made on your paratransit service versus other means).

Fixed route service information also should be collected. If you plan to operate a Call-A-Lift-Bus service, track requests by route to help you determine which routes to make 100% accessible when additional buses are purchased. Paratransit service information also can be used to plan accessible routes and to design service routes or route deviation systems.

It is important that you include consumers in the monitoring and evaluation of service. Provide a monthly operations report, including the above suggested statistics, to your consumer advisory committee.

It is important that you include consumers in the monitoring and evaluation of service. Provide a monthly operations report, including the above suggested statistics, to your consumer advisory

committee. Riders will be able to help you interpret these statistics and identify service design problems. Making this information available will help focus the meetings on important "system" issues and avoid discussions of individual problems and complaints.

Section 5.

Updating the Plan

A revised plan, based on the latest service and budget information must be submitted to your regional UMTA office or state administering agency as indicated in Table 7.1.

Annual updates must address each of the items contained in the initial plan. Current information about your fixed route and paratransit services must be included. New

information about other paratransit services in the area and any additional efforts to coordinate with other agencies and providers also should be described.

If your initial plan proposed implementation in more than one year, your update(s) must state whether or not previously approved milestones have been achieved. If any milestones have not been achieved, your update must provide reasons for the slippage and a description of all actions being taken to compensate for these delays. Updates which substantially alter the initial plan are subject to UMTA disapproval. Substantial changes would include extending the implementation period (e.g. from three to four years) or delaying milestones such that "measured progress" is no longer demonstrated.

Annual plan updates also must describe how the requirements for ongoing participation by persons with disabilities contained in §37.137(c) have been met. Participation is required in the ongoing development and assessment of services, in the development of annual updates, and in any request for an undue financial

If your initial plan proposed implementation in more than one year, your update(s) must state whether or not previously approved milestones have been achieved.

burden waiver (if applicable).

More frequent internal evaluation and revision is recommended. To avoid end of the year problems, evaluate your service monthly after critical service changes are implemented. An internal "updating" of your plan is suggested every 3-6 months

during the implementation period.

If conditions cause you to extend your planned implementation beyond January 26, 1997, you will need to request an undue

financial burden waiver. If the situation warrants, don't wait until your next scheduled official plan update to request a waiver. Before a waiver is requested, thoroughly review your entire plan. Conditions may have changed enough to warrant a review of the service model selected or the level of coordination with other agencies and providers. Keep in mind that waivers will only be granted if every possible effort is made to achieve compliance and an undue financial burden exists.

The submission of an annual plan is an ongoing planning requirement. Updates must be provided even after full compliance with the complementary paratransit service provisions are achieved. At that point, your paratransit service should be well established. Annual updates need only state what service is offered and point out any ongoing fixed route or paratransit improvements or changes that have occurred or are anticipated.

FOOTNOTES

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- (2) Grey Advertising, Inc., *Summary Report of Data from National Survey of Transportation Handicapped People*, prepared for the Urban Mass Transportation Administration, USDOT, June 1978.
- (3) Margolis, R. and Price, B., "The vital link: Aging and Community Transportation", *Community Transportation Reporter*, February 1991.
- (4) Bureau of the Census, *Current Population Reports*, January, 1989.
- (5) Center for Systems and Program Development, Inc., *Best Practices in Specialized and Human Services Transportation Coordination*, prepared for the U.S. Department of Health and Human Services and the U.S. Department of Transportation, July, 1989 (DOT-T-89-20).
- (6) Erskine S. Walther, Transportation Institute, North Carolina AT&T State University, *Coordination of Rural Public Transportation Services in Three Southeastern States*, prepared for the Urban Mass Transportation Administration, USDOT, June, 1990 (DOT-T-90-17).
- (7) Lewis, David, Hickling Corporation, *Preliminary Regulatory Impact Analysis of Transportation Accessibility Requirements for the Americans with Disabilities Act*, prepared for the U.S. Department of Transportation, April, 1991.
- (8) KETRON, Inc., *Market Survey - Planning, Development and Implementation of a Paratransit Program for the Transportation Disabled Residents of New York City, Volume 2*, prepared for the Office of Management and Budget, New York City, September, 1987.
- (9) Peat, Marwick, Mitchell & Co., *Planning Services for Transportation - Handicapped People: Data Collection Manual*, prepared for the Urban Mass Transportation Administration, USDOT, revised January, 1985. (DOT-1-83-40R)
- (10) Crain & Associates, Inc., Pat Piras Consulting Services, Nelson/Nygaard Consulting Services, "Working Paper 6: Service Needs Analysis, *San Francisco Bay Area Regional Paratransit Plan*", prepared for the Metropolitan Transportation Commission, January, 1990.
- (11) Robert F. Casey, Lawrence N. Labell, Simon P. Prensky and Carol L. Schweiger, *Advanced Public Transportation Systems: The State of the Art*, prepared for UMTA, April 1991, DOT-VNTSC-UMTA-91-2.

APPENDIX A

Applicable Regulatory Text

49 CFR Parts 37 and 38

PART 37—TRANSPORTATION SERVICES FOR INDIVIDUALS WITH DISABILITIES (ADA)

Subpart A—General

Sec.

- 37.1 Purpose.
- 37.3 Definitions.
- 37.5 Nondiscrimination.
- 37.7 Standards for accessible vehicles.
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Subpart B—Applicability

- 37.21 Applicability: General.
- 37.23 Service under contract.
- 37.25 University transportation systems.
- 37.27 Transportation for elementary and secondary education systems.
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- 37.33 Airport transportation systems.
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Subpart C—Transportation Facilities

- 37.41 Construction of transportation facilities by public entities.
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- 37.45 Construction and alteration of transportation facilities by private entities.
- 37.47 Key stations in light and rapid rail systems.
- 37.49 Designation of responsible person(a) for intercity and commuter rail stations.
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- 37.53 Exception for New York and Philadelphia.
- 37.55 Intercity rail station accessibility.
- 37.57 Required cooperation.
- 37.59 Differences in accessibility completion dates.
- 37.61 Public transportation programs and activities in existing facilities.
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Subpart D—Acquisition of Accessible Vehicles by Public Entities

- 37.71 Purchase or lease of new non-rail vehicles by public entities operating fixed route systems.
- 37.73 Purchase or lease of used non-rail vehicles by public entities operating fixed route systems.
- 37.75 Remanufacture of non-rail vehicles and purchase or lease of remanufactured non-rail vehicles by public entities operating fixed route systems.
- 37.77 Purchase or lease of new non-rail vehicles by public entities operating demand responsive systems for the general public.
- 37.79 Purchase or lease of new rail vehicles by public entities operating rapid or light rail systems.
- 37.81 Purchase or lease of used rail vehicles by public entities operating rapid or light rail systems.
- 37.83 Remanufacture of rail vehicles and purchase or lease of remanufactured rail vehicles by public entities operating rapid or light rail systems.

- 37.85 Purchase or lease of new intercity and commuter rail cars.
- 37.87 Purchase or lease of used intercity and commuter rail cars.
- 37.89 Remanufacture of intercity and commuter rail cars and purchase or lease of remanufactured intercity and commuter rail cars.
- 37.91 Wheelchair locations and food service on intercity rail trains.
- 37.93 One car per train rule.
- 37.95 Ferries and other passenger vessels operated by public entities. [Reserved]
- 37.97–37.99 [Reserved]

Subpart E—Acquisition of Accessible Vehicles by Private Entities

- 37.101 Purchase or lease of vehicles by private entities not primarily engaged in the business of transporting people.
- 37.103 Purchase or lease of new non-rail vehicles by private entities primarily engaged in the business of transporting people.
- 37.105 Equivalent service standard.
- 37.107 Acquisition of passenger rail cars by private entities primarily engaged in the business of transporting people.
- 37.109 Ferries and other passenger vessels operated by private entities. [Reserved]
- 37.111–37.119 [Reserved]

Subpart F—Paratransit as a Complement to Fixed Route Service

- 37.121 Requirement for comparable complementary paratransit service.
- 37.123 ADA paratransit eligibility: Standards.
- 37.125 ADA paratransit eligibility: Process.
- 37.127 Complementary paratransit service for visitors.
- 37.129 Types of service.
- 37.131 Service criteria for complementary paratransit.
- 37.133 Subscription service.
- 37.135 Submission of paratransit plan.
- 37.137 Paratransit plan development.
- 37.139 Plan contents.
- 37.141 Requirements for a joint paratransit plan.
- 37.143 Paratransit plan implementation.
- 37.145 State comment on plans.
- 37.147 Considerations during UMTA review.
- 37.149 Disapproved plans.
- 37.151 Waiver for undue financial burden.
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- 37.155 Factors in decision to grant an undue financial burden waiver.
- 37.157–37.159 [Reserved]

Subpart G—Provision of Service

- 37.161 Maintenance of accessible features: General.
- 37.163 Keeping vehicle lifts in operative condition—public entities.
- 37.165 Lift and securement use.
- 37.167 Other service requirements.
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- 37.171 Equivalency requirement for demand responsive service operated by private entities not primarily engaged in the business of transporting people.
- 37.173 Training requirements.

Appendix A to part 37—Standards for Accessible Transportation Facilities

Appendix B to part 37—UMTA Regional Offices

Appendix C to part 37—Certifications

Appendix D to part 37—Construction and Interpretations of Provisions of 49 CFR part 37

Authority: Americans with Disabilities Act of 1990 (42 U.S.C. 12101–12213); 49 U.S.C. 322.

Subpart A—General

§ 37.1 Purpose.

The purpose of this part is to implement the transportation and related provisions of titles II and III of the Americans with Disabilities Act of 1990.

§ 37.3 Definitions.

As used in this part:

Accessible means, with respect to vehicles and facilities, complying with the accessibility requirements of parts 37 and 38 of this title.

The Act or *ADA* means the Americans with Disabilities Act of 1990 (Pub. L. 101–336, 104 Stat. 327, 42 U.S.C. 12101–12213 and 47 U.S.C. 225 and 611), as it may be amended from time to time.

Administrator means Administrator of the Urban Mass Transportation Administration, or his or her designee.

Alteration means a change to an existing facility, including, but not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, changes or rearrangement in structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, reroofing, painting or wallpapering, asbestos removal, or changes to mechanical or electrical systems are not alterations unless they affect the usability of the building or facility.

Automated guideway transit system or *AGT* means a fixed-guideway transit system which operates with automated (driverless) individual vehicles or multi-car trains. Service may be on a fixed schedule or in response to a passenger-activated call button.

Auxiliary aids and services includes:

(1) Qualified interpreters, notetakers, transcription services, written materials, telephone headset amplifiers, assistive listening devices, assistive listening systems, telephones compatible with hearing aids, closed caption decoders, closed and open captioning, text telephones (also known as telephone devices for the deaf, or TDDs), videotext displays, or other effective methods of making aurally delivered materials

available to individuals with hearing impairments;

(2) Qualified readers, taped texts, audio recordings, Brailled materials, large print materials, or other effective methods of making visually delivered materials available to individuals with visual impairments;

(3) Acquisition or modification of equipment or devices; or

(4) Other similar services or actions.

Bus means any of several types of self-propelled vehicles, generally rubber-tired, intended for use on city streets, highways, and busways, including but not limited to minibuses, forty- and thirty-foot buses, articulated buses, double-deck buses, and electrically powered trolley buses, used by public entities to provide designated public transportation service and by private entities to provide transportation service including, but not limited to, specified public transportation services. Self-propelled, rubber-tired vehicles designed to look like antique or vintage trolleys are considered buses.

Commerce means travel, trade, transportation, or communication among the several states, between any foreign country or any territory or possession and any state, or between points in the same state but through another state or foreign country.

Commuter authority means any state, local, regional authority, corporation, or other entity established for purposes of providing commuter rail transportation (including, but not necessarily limited to, the New York Metropolitan Transportation Authority, the Connecticut Department of Transportation, the Maryland Department of Transportation, the Southeastern Pennsylvania Transportation Authority, the New Jersey Transit Corporation, the Massachusetts Bay Transportation Authority, the Port Authority Trans-Hudson Corporation, and any successor agencies) and any entity created by one or more such agencies for the purposes of operating, or contracting for the operation of, commuter rail transportation.

Commuter bus service means fixed route bus service, characterized by service predominantly in one direction during peak periods, limited stops, use of multi-ride tickets, and routes of extended length, usually between the central business district and outlying suburbs. Commuter bus service may also include other service, characterized by a limited route structure, limited stops, and a coordinated relationship to another mode of transportation.

Commuter rail car means a rail passenger car obtained by a commuter

authority for use in commuter rail transportation.

Commuter rail transportation means short-haul rail passenger service operating in metropolitan and suburban areas, whether within or across the geographical boundaries of a state, usually characterized by reduced fare, multiple ride, and commutation tickets and by morning and evening peak period operations. This term does not include light or rapid rail transportation.

Demand responsive system means any system of transporting individuals, including the provision of designated public transportation service by public entities and the provision of transportation service by private entities, including but not limited to specified public transportation service, which is not a fixed route system.

Designated public transportation means transportation provided by a public entity (other than public school transportation) by bus, rail, or other conveyance (other than transportation by aircraft or intercity or commuter rail transportation) that provides the general public with general or special service, including charter service, on a regular and containing basis.

Disability means, with respect to an individual, a physical or mental impairment that substantially limits one or more of the major life activities of such individual; a record of such an impairment; or being regarded as having such an impairment.

(1) The phrase *physical or mental impairment* means—

(i) Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, special sense organs, respiratory including speech organs, cardiovascular, reproductive, digestive, genito-urinary, hemic and lymphatic, skin, and endocrine;

(ii) Any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities;

(iii) The term *physical or mental impairment* includes, but is not limited to, such contagious or noncontagious diseases and conditions as orthopedic, visual, speech, and hearing impairments; cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, heart disease, diabetes, mental retardation, emotional illness, specific learning disabilities, HIV disease, tuberculosis, drug addiction and alcoholism;

(iv) The phrase *physical or mental impairment* does not include homosexuality or bisexuality.

(2) The phrase *major life activities* means functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and work.

(3) The phrase *has a record of such an impairment* means has a history of, or has been misclassified as having, a mental or physical impairment that substantially limits one or more major life activities.

(4) The phrase *is regarded as having such an impairment* means—

(i) Has a physical or mental impairment that does not substantially limit major life activities, but which is treated by a public or private entity as constituting such a limitation;

(ii) Has a physical or mental impairment that substantially limits a major life activity only as a result of the attitudes of others toward such an impairment; or

(iii) Has none of the impairments defined in paragraph (1) of this definition but is treated by a public or private entity as having such an impairment.

(5) The term *disability* does not include—

(i) Transvestism, transsexualism, pedophilia, exhibitionism, voyeurism, gender identity disorders not resulting from physical impairments, or other sexual behavior disorders;

(ii) Compulsive gambling, kleptomania, or pyromania;

(iii) Psychoactive substance abuse disorders resulting from the current illegal use of drugs.

Facility means all or any portion of buildings, structures, sites, complexes, equipment, roads, walks, passageways, parking lots, or other real or personal property, including the site where the building, property, structure, or equipment is located.

Fixed route system means a system of transporting individuals (other than by aircraft), including the provision of designated public transportation service by public entities and the provision of transportation service by private entities, including, but not limited to, specified public transportation service, on which a vehicle is operated along a prescribed route according to a fixed schedule.

High speed rail means a rail service having the characteristics of intercity rail service which operates primarily on a dedicated guideway or track not used, for the most part, by freight, including, but not limited to, trains on welded rail, magnetically levitated (maglev) vehicles

on a special guideway, or other advanced technology vehicles, designed to travel at speeds in excess of those possible on other types of railroads.

Individual with a disability means a person who has a disability, but does not include an individual who is currently engaging in the illegal use of drugs, when a public or private entity acts on the basis of such use.

Intercity rail passenger car means a rail car, intended for use by revenue passengers, obtained by the National Railroad Passenger Corporation (Amtrak) for use in intercity rail transportation.

Intercity rail transportation means transportation provided by Amtrak.

Light rail means a streetcar-type vehicle operated on city streets, semi-exclusive rights of way, or exclusive rights of way. Service may be provided by step-entry vehicles or by level boarding.

New vehicle means a vehicle which is offered for sale or lease after manufacture without any prior use.

Operates includes, with respect to a fixed route or demand responsive system, the provision of transportation service by a public or private entity itself or by a person under a contractual or other arrangement or relationship with the entity.

Over-the-road bus means a bus characterized by an elevated passenger deck located over a baggage compartment.

Paratransit means comparable transportation service required by the ADA for individuals with disabilities who are unable to use fixed route transportation systems.

Private entity means any entity other than a public entity.

Public entity means:

- (1) Any state or local government;
- (2) Any department, agency, special purpose district, or other instrumentality of one or more state or local governments; and
- (3) The National Railroad Passenger Corporation (Amtrak) and any commuter authority.

Purchase or lease, with respect to vehicles, means the time at which an entity is legally obligated to obtain the vehicles, such as the time of contract execution.

Public school transportation means transportation by schoolbus vehicles of schoolchildren, personnel, and equipment to and from a public elementary or secondary school and school-related activities.

Rapid rail means a subway-type transit vehicle railway operated on exclusive private rights of way with high level platform stations. Rapid rail also

may operate on elevated or at grade level track separated from other traffic.

Remanufactured vehicle means a vehicle which has been structurally restored and has had new or rebuilt major components installed to extend its service life.

Secretary means the Secretary of Transportation or his/her designee.

Section 504 means section 504 of the Rehabilitation Act of 1973 (Pub. L. 93-112, 87 Stat. 394, 29 U.S.C. 794), as amended.

Service animal means any guide dog, signal dog, or other animal individually trained to work or perform tasks for an individual with a disability, including, but not limited to, guiding individuals with impaired vision, alerting individuals with impaired hearing to intruders or sounds, providing minimal protection or rescue work, pulling a wheelchair, or fetching dropped items.

Solicitation means the closing date for the submission of bids or offers in a procurement.

Specified public transportation means transportation by bus, rail, or any other conveyance (other than aircraft) provided by a private entity to the general public, with general or special service (including charter service) on a regular and continuing basis.

Station means, with respect to intercity and commuter rail transportation, the portion of a property located appurtenant to a right of way on which intercity or commuter rail transportation is operated, where such portion is used by the general public and is related to the provision of such transportation, including passenger platforms, designated waiting areas, restrooms, and, where a public entity providing rail transportation owns the property, concession areas, to the extent that such public entity exercises control over the selection, design, construction, or alteration of the property, but this term does not include flag stops (i.e., stations which are not regularly scheduled stops but at which trains will stop to board or detain passengers only on signal or advance notice).

Transit facility means, for purposes of determining the number of text telephones needed consistent with section 103.1(12) of appendix A to this part, a physical structure the primary function of which is to facilitate access to and from a transportation system which has scheduled stops at the structure. The term does not include an open structure or a physical structure the primary purpose of which is other than providing transportation services.

UMT Act means the Urban Mass Transportation Act of 1964, as amended (49 U.S.C. App. 1601 *et seq.*).

Used vehicle means a vehicle with prior use.

Vanpool means a voluntary commuter ridesharing arrangement, using vans with a seating capacity greater than 7 persons (including the driver) or buses, which provides transportation to a group of individuals traveling directly from their homes to their regular places of work within the same geographical area, and in which the commuter/driver does not receive compensation beyond reimbursement for his or her costs of providing the service.

Vehicle, as the term is applied to private entities, does not include a rail passenger car, railroad locomotive, railroad freight car, or railroad caboose, or other rail rolling stock described in section 242 of title III of the Act.

Wheelchair means a mobility aid belonging to any class of three or four-wheeled devices, usable indoors, designed for and used by individuals with mobility impairments, whether operated manually or powered. A "common wheelchair" is such a device which does not exceed 30 inches in width and 48 inches in length measured two inches above the ground, and does not weigh more than 600 pounds when occupied.

§ 37.5 Nondiscrimination.

(a) No entity shall discriminate against an individual with a disability in connection with the provision of transportation service.

(b) Notwithstanding the provision of any special transportation service to individuals with disabilities, an entity shall not, on the basis of disability, deny to any individual with a disability the opportunity to use the entity's transportation service for the general public, if the individual is capable of using that service.

(c) An entity shall not require an individual with a disability to use designated priority seats, if the individual does not choose to use these seats.

(d) An entity shall not impose special charges, not authorized by this part, on individuals with disabilities, including individuals who use wheelchairs, for providing services required by this part or otherwise necessary to accommodate them.

(e) An entity shall not require that an individual with disabilities be accompanied by an attendant.

(f) Private entities that are primarily engaged in the business of transporting people and whose operations affect commerce shall not discriminate against any individual on the basis of disability in the full and equal enjoyment of

specified transportation services. This obligation includes, with respect to the provision of transportation services, compliance with the requirements of the rules of the Department of Justice concerning eligibility criteria, making reasonable modifications, providing auxiliary aids and services, and removing barriers (28 CFR 36.301—36.306).

(g) An entity shall not refuse to serve an individual with a disability or require anything contrary to this part because its insurance company conditions coverage or rates on the absence of individuals with disabilities or requirements contrary to this part.

(h) It is not discrimination under this part for an entity to refuse to provide service to an individual with disabilities because that individual engages in violent, seriously disruptive, or illegal conduct. However, an entity shall not refuse to provide service to an individual with disabilities solely because the individual's disability results in appearance or involuntary behavior that may offend, annoy, or inconvenience employees of the entity or other persons.

§ 37.7 Standards for accessible vehicles.

(a) For purposes of this part, a vehicle shall be considered to be readily accessible to and usable by individuals with disabilities if it meets the requirements of this part and the standards set forth in part 38 of this title.

(b) For purposes of implementing the equivalent facilitation provision in § 38.2 of this title, a determination of compliance will be made by the Administrator or the Federal Railroad Administrator, as applicable, on a case-by-case basis. An entity wishing to employ equivalent facilitation in relation to a specification of part 38 of this title shall submit such a request to UMTA or FRA, as applicable, and include the following information:

(1) Entity name, address, contact person, and telephone;

(2) Specific provision of part 38 of this title with which the entity is unable to comply;

(3) Reasons for inability to comply;

(4) Alternative method of compliance, with demonstration of how the alternative meets or exceeds the level of accessibility or usability of the vehicle provided in part 38 of this title; and

(5) Public participation used in developing alternative method of compliance and input from that participation.

(c) Over-the-road buses acquired by public entities (or by a contractor to a public entity as provided in § 37.23 of

this part) shall comply with § 38.23 and subpart G of part 38 of this title.

§ 37.9 Standards for accessible transportation facilities.

(a) For purposes of this part, a transportation facility shall be considered to be readily accessible to and usable by individuals with disabilities if it meets the requirements of this part and the standards set forth in appendix A to this part.

(b) Facility alterations begun before January 26, 1992, in a good faith effort to make a facility accessible to individuals with disabilities may be used to meet the key station requirements set forth in §§ 37.47 and 37.51 of this part, even if these alterations are not consistent with the standards set forth in appendix A to this part, if the modifications complied with the Uniform Federal Accessibility Standard (UFAS) (41 CFR part 101-19, subpart 101-19.6) or ANSI A117.1(1980) (American National Standards Specification for Making Buildings and Facilities Accessible to and Usable by, the Physically Handicapped). This paragraph applies only to alterations of individual elements and spaces and only to the extent that provisions covering those elements or spaces are contained in UFAS or ANSI A117.1, as applicable.

(c) Public entities shall ensure the construction of new bus stop pads are in compliance with section 10.2.1.(1) of appendix A to this part, to the extent construction specifications are within their control.

(d) For purposes of implementing the equivalent facilitation provision in section 2.2 of appendix A to this part, a determination of compliance will be made by the Administrator or the Federal Railroad Administrator, as applicable, on a case-by-case basis. An entity wishing to employ equivalent facilitation in relation to a specification of appendix A to this part shall submit such a request to UMTA or FRA, as applicable, and include the following information:

(1) Entity name, address, contact person and telephone;

(2) Specific provision of appendix A with which the entity is unable to comply;

(3) Reasons for inability to comply;

(4) Alternative method of compliance, with demonstration of how the alternative meets or exceeds the level of accessibility or usability of the facility provided in appendix A; and

(5) Public participation used in developing alternative method of compliance and input from that participation.

§ 37.11 Administrative enforcement.

(a) Recipients of Federal financial assistance from the Department of Transportation are subject to administrative enforcement of the requirements of this part under the provisions of 49 CFR part 27, subpart F.

(b) Public entities, whether or not they receive Federal financial assistance, also are subject to enforcement action as provided by the Department of Justice.

(c) Private entities, whether or not they receive Federal financial assistance, are also subject to enforcement action as provided in the regulations of the Department of Justice implementing title III of the ADA (28 CFR part 36).

§ 37.13 Effective date for certain vehicle lift specifications.

The vehicle lift specifications identified in §§ 38.23(b)(6), 38.83(b)(6), 38.95(b)(6), and 38.125(b) of this title apply to solicitations for vehicles under this part after January 25, 1992.

§§ 37.15–37.19 [Reserved]

Subpart B—Applicability

§ 37.21 Applicability: General.

(a) This part applies to the following entities, whether or not they receive Federal financial assistance from the Department of Transportation:

(1) Any public entity that provides designated public transportation or intercity or commuter rail transportation;

(2) Any private entity that provides specified public transportation; and

(3) Any private entity that is not primarily engaged in the business of transporting people but operates a demand responsive or fixed route system.

(b) For entities receiving Federal financial assistance from the Department of Transportation, compliance with applicable requirements of this part is a condition of compliance with section 504 of the Rehabilitation Act of 1973 and of receiving financial assistance.

(c) Entities to which this part applies also may be subject to ADA regulations of the Department of Justice (28 CFR parts 35 or 38, as applicable). The provisions of this part shall be interpreted in a manner that will make them consistent with applicable Department of Justice regulations. In any case of apparent inconsistency, the provisions of this part shall prevail.

§ 37.23 Service under contract.

(a) When a public entity enters into a contractual or other arrangement or relationship with a private entity to operate fixed route or demand responsive service, the public entity shall ensure that the private entity meets the requirements of this part that would apply to the public entity if the public entity itself provided the service.

(b) A private entity which purchases or leases new, used, or remanufactured vehicles, or remanufactures vehicles, for use, or in contemplation of use, in fixed route or demand responsive service under contract or other arrangement or relationship with a public entity, shall acquire accessible vehicles in all situations in which the public entity itself would be required to do so by this part.

(c) A public entity which enters into a contractual or other arrangement or relationship with a private entity to provide fixed route service shall ensure that the percentage of accessible vehicles operated by the public entity in its overall fixed route or demand responsive fleet is not diminished as a result.

(d) A private entity that provides fixed route or demand responsive transportation service under contract or other arrangement with another private entity shall be governed, for purposes of the transportation service involved, by the provisions of this part applicable to the other entity.

§ 37.25 University transportation systems.

(a) Transportation services operated by private institutions of higher education are subject to the provisions of this part governing private entities not primarily engaged in the business of transporting people.

(b) Transportation systems operated by public institutions of higher education are subject to the provisions of this part governing public entities. If a public institution of higher education operates a fixed route system, the requirements of this part governing commuter bus service apply to that system.

§ 37.27 Transportation for elementary and secondary education systems.

(a) The requirements of this part do not apply to public school transportation.

(b) The requirements of this part do not apply to the transportation of school children to and from a private elementary or secondary school, and its school-related activities, if the school is a recipient of Federal financial assistance, subject to the provisions of section 504 of the Rehabilitation Act of

1973, and is providing transportation service to students with disabilities equivalent to that provided to students without disabilities. The test of equivalence is the same as that provided in § 37.105. If the school does not meet the criteria of this paragraph for exemption from the requirements of this part, it is subject to the requirements of this part for private entities not primarily engaged in transporting people.

§ 37.29 Private entities providing taxi service.

(a) Providers of taxi service are subject to the requirements of this part for private entities primarily engaged in the business of transporting people which provide demand responsive service.

(b) Providers of taxi service are not required to purchase or lease accessible automobiles. When a provider of taxi service purchases or leases a vehicle other than an automobile, the vehicle is required to be accessible unless the provider demonstrates equivalency as provided in § 37.105 of this part. A provider of taxi service is not required to purchase vehicles other than automobiles in order to have a number of accessible vehicles in its fleet.

(c) Private entities providing taxi service shall not discriminate against individuals with disabilities by actions including, but not limited to, refusing to provide service to individuals with disabilities who can use taxi vehicles, refusing to assist with the stowing of mobility devices, and charging higher fares or fees for carrying individuals with disabilities and their equipment than are charged to other persons.

§ 37.31 Vanpools.

Vanpool systems which are operated by public entities, or in which public entities own or purchase or lease the vehicles, are subject to the requirements of this part for demand responsive service for the general public operated by public entities. A vanpool system in this category is deemed to be providing equivalent service to individuals with disabilities if a vehicle that an individual with disabilities can use is made available to and used by a vanpool in which such an individual chooses to participate.

§ 37.33 Airport transportation systems.

(a) Transportation systems operated by public airport operators, which provide designated public transportation and connect parking lots and terminals or provide transportation among terminals, are subject to the requirements of this part for fixed route

or demand responsive systems, as applicable, operated by public entities. Public airports which operate fixed route transportation systems are subject to the requirements of this part for commuter bus service operated by public entities. The provision by an airport of additional accommodations (e.g., parking spaces in a close-in lot) is not a substitute for meeting the requirements of this part.

(b) Fixed-route transportation systems operated by public airport operators between the airport and a limited number of destinations in the area it serves are subject to the provisions of this part for commuter bus systems operated by public entities.

(c) Private jitney or shuttle services that provide transportation between an airport and destinations in the area it serves in a route-deviation or other variable mode are subject to the requirements of this part for private entities primarily engaged in the business of transporting people which provide demand responsive service. They may meet equivalency requirements by such means as sharing or pooling accessible vehicles among operators, in a way that ensures the provision of equivalent service.

§ 37.35 Supplemental service for other transportation modes.

(a) Transportation service provided by bus or other vehicle by an intercity commuter or rail operator, as an extension of or supplement to its rail service, and which connects an intercity rail station and limited other points, is subject to the requirements of this part for fixed route commuter bus service operated by a public entity.

(b) Dedicated bus service to commuter rail systems, with through ticketing arrangements and which is available only to users of the commuter rail system, is subject to the requirements of this part for fixed route commuter bus service operated by a public entity.

§ 37.37 Other applications.

(a) A private entity does not become subject to the requirements of this part for public entities, because it receives an operating subsidy from, is regulated by, or is granted a franchise or permit to operate by a public entity.

(b) Shuttle systems and other transportation services operated by privately-owned hotels, car rental agencies, historical or theme parks, and other public accommodations are subject to the requirements of this part for private entities not primarily engaged in the business of transporting people. Either the requirements for

demand responsive or fixed route service may apply, depending upon the characteristics of each individual system of transportation.

(c) Conveyances used by members of the public primarily for recreational purposes rather than for transportation (e.g., amusement park rides, ski lifts, or historic rail cars or trolleys operated in museum settings) are not subject to the requirements of this part. Such conveyances are subject to Department of Justice regulations implementing title II or title III of the ADA (28 CFR part 35 or 36), as applicable.

(d) Transportation services provided by an employer solely for its own employees are not subject to the requirements of this part. Such services are subject to the regulations of the Equal Employment Opportunity Commission under title I of the ADA (29 CFR part 1630) and, with respect to public entities, the regulations of the Department of Justice under title II of the ADA (28 CFR part 35).

(e) Transportation systems operated by private clubs or establishments exempted from coverage under title II of the Civil Rights Act of 1964 (42 U.S.C. 2000-a(e)) or religious organizations or entities controlled by religious organizations are not subject to the requirements of this part.

(f) If a parent private company is not primarily engaged in the business of transporting people, or is not a place of public accommodation, but a subsidiary company or an operationally distinct segment of the company is primarily engaged in the business of transporting people, the transportation service provided by the subsidiary or segment is subject to the requirements of this part for private entities primarily engaged in the business of transporting people.

(g) High-speed rail systems operated by public entities are subject to the requirements of this part governing intercity rail systems.

(h) Private rail systems providing fixed route or specified public transportation service are subject to the requirements of § 37.107 with respect to the acquisition of rail passenger cars. Such systems are subject to the requirements of the regulations of the Department of Justice implementing title III of the ADA (28 CFR part 36) with respect to stations and other facilities.

§ 37.39 [Reserved]

Subpart C—Transportation Facilities

§ 37.41 Construction of transportation facilities by public entities.

A public entity shall construct any new facility to be used in providing designated public transportation

services so that the facility is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs. This requirement also applies to the construction of a new station for use in intercity or commuter rail transportation. For purposes of this section, a facility or station is "new" if its construction begins (i.e., issuance of notice to proceed) after January 25, 1992, or, in the case of intercity or commuter rail stations, after October 7, 1991.

§ 37.43 Alteration of transportation facilities by public entities.

(a) (1) When a public entity alters an existing facility or a part of an existing facility used in providing designated public transportation services in a way that affects or could affect the usability of the facility or part of the facility, the entity shall make the alterations (or ensure that the alterations are made) in such a manner, to the maximum extent feasible, that the altered portions of the facility are readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, upon the completion of such alterations.

(2) When a public entity undertakes an alteration that affects or could affect the usability of or access to an area of a facility containing a primary function, the entity shall make the alteration in such a manner that, to the maximum extent feasible, the path of travel to the altered area and the bathrooms, telephones, and drinking fountains serving the altered area are readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, upon completion of the alterations. *Provided*, that alterations to the path of travel, drinking fountains, telephones and bathrooms are not required to be made readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, if the cost and scope of doing so would be disproportionate.

(3) The requirements of this paragraph also apply to the alteration of existing intercity or commuter rail stations by the responsible person for, owner of, or person in control of the station.

(4) The requirements of this section apply to any alteration which begins (i.e., issuance of notice to proceed or work order, as applicable) after January 25, 1992, or, in the case of intercity and commuter rail stations, after October 7, 1991.

(b) As used in this section, the phrase *to the maximum extent feasible* applies to the occasional case where the nature of an existing facility makes it impossible to comply fully with

applicable accessibility standards through a planned alteration. In these circumstances, the entity shall provide the maximum physical accessibility feasible. Any altered features of the facility or portion of the facility that can be made accessible shall be made accessible. If providing accessibility to certain individuals with disabilities (e.g., those who use wheelchairs) would not be feasible, the facility shall be made accessible to individuals with other types of disabilities (e.g., those who use crutches, those who have impaired vision or hearing, or those who have other impairments).

(c) As used in this section, a *primary function* is a major activity for which the facility is intended. Areas of transportation facilities that involve primary functions include, but are not necessarily limited to, ticket purchase and collection areas, passenger waiting areas, train or bus platforms, baggage checking and return areas and employment areas (except those involving non-occupiable spaces accessed only by ladders, catwalks, crawl spaces, very narrow passageways, or freight (non-passenger) elevators which are frequented only by repair personnel).

(d) As used in this section, a "path of travel" includes a continuous, unobstructed way of pedestrian passage by means of which the altered area may be approached, entered, and exited, and which connects the altered area with an exterior approach (including sidewalks, parking areas, and streets), an entrance to the facility, and other parts of the facility. The term also includes the restrooms, telephones, and drinking fountains serving the altered area. An accessible path of travel may include walks and sidewalks, curb ramps and other interior or exterior pedestrian ramps, clear floor paths through corridors, waiting areas, concourses, and other improved areas, parking access aisles, elevators and lifts, bridges, tunnels, or other passageways between platforms, or a combination of these and other elements.

(e) (1) Alterations made to provide an accessible path of travel to the altered area will be deemed disproportionate to the overall alteration when the cost exceeds 20 percent of the cost of the alteration to the primary function area (without regard to the costs of accessibility modifications).

(2) Costs that may be counted as expenditures required to provide an accessible path of travel include:

(i) Costs associated with providing an accessible entrance and an accessible

route to the altered area (e.g., widening doorways and installing ramps);

(ii) Costs associated with making restrooms accessible (e.g., grab bars, enlarged toilet stalls, accessible faucet controls);

(iii) Costs associated with providing accessible telephones (e.g., relocation of phones to an accessible height, installation of amplification devices or TDDs);

(iv) Costs associated with relocating an inaccessible drinking fountain

(f) (1) When the cost of alterations necessary to make a path of travel to the altered area fully accessible is disproportionate to the cost of the overall alteration, then such areas shall be made accessible to the maximum extent without resulting in disproportionate costs;

(2) In this situation, the public entity should give priority to accessible elements that will provide the greatest access, in the following order:

(i) An accessible entrance;

(ii) An accessible route to the altered area;

(iii) At least one accessible restroom for each sex or a single unisex restroom (where there are one or more restrooms);

(iv) Accessible telephones;

(v) Accessible drinking fountains;

(vi) When possible, other accessible elements (e.g., parking, storage, alarms).

(g) If a public entity performs a series of small alterations to the area served by a single path of travel rather than making the alterations as part of a single undertaking, it shall nonetheless be responsible for providing an accessible path of travel.

(h)(1) If an area containing a primary function has been altered without providing an accessible path of travel to that area, and subsequent alterations of that area, or a different area on the same path of travel, are undertaken within three years of the original alteration, the total cost of alteration to the primary function areas on that path of travel during the preceding three year period shall be considered in determining whether the cost of making that path of travel is disproportionate;

(2) For the first three years after January 26, 1992, only alterations undertaken between that date and the date of the alteration at issue shall be considered in determining if the cost of providing accessible features is disproportionate to the overall cost of the alteration.

(3) Only alterations undertaken after January 26, 1992, shall be considered in determining if the cost of providing an accessible path of travel is

disproportionate to the overall cost of the alteration.

§ 37.45 Construction and alteration of transportation facilities by private entities.

In constructing and altering transit facilities, private entities shall comply with the regulations of the Department of Justice implementing Title III of the ADA (28 CFR part 36).

§ 37.47 Key stations in light and rapid rail systems.

(a) Each public entity that provides designated public transportation by means of a light or rapid rail system shall make key stations on its system readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs. This requirement is separate from and in addition to requirements set forth in § 37.43 of this part.

(b) Each public entity shall determine which stations on its system are key stations. The entity shall identify key stations, using the planning and public participation process set forth in paragraph (d) of this section, and taking into consideration the following criteria:

(1) Stations where passenger boardings exceed average station passenger boardings on the rail system by at least fifteen percent, unless such a station is close to another accessible station;

(2) Transfer stations on a rail line or between rail lines;

(3) Major interchange points with other transportation modes, including stations connecting with major parking facilities, bus terminals, intercity or commuter rail stations, passenger vessel terminals, or airports;

(4) End stations, unless an end station is close to another accessible station; and

(5) Stations serving major activity centers, such as employment or government centers, institutions of higher education, hospitals or other major health care facilities, or other facilities that are major trip generators for individuals with disabilities.

(c)(1) Unless the entity receives an extension under paragraph (c)(2) of this section, the public entity shall achieve accessibility of key stations as soon as practicable, but in no case later than July 26, 1993.

(2) The UMTA Administrator may grant an extension of this completion date for key station accessibility for a period up to July 26, 2020, provided that two-thirds of key stations are made accessible by July 26, 2010. Extensions may be granted as provided in paragraph (e) of this section.

(d) The public entity shall develop a plan for compliance for this section. The plan shall be submitted to the appropriate UMTA regional office by July 26, 1992. (See appendix B to this part for list.)

(1) The public entity shall consult with individuals with disabilities affected by the plan. The public entity also shall hold at least one public hearing on the plan and solicit comments on it. The plan submitted to UMTA shall document this public participation, including summaries of the consultation with individuals with disabilities and the comments received at the hearing and during the comment period. The plan also shall summarize the public entity's responses to the comments and consultation.

(2) The plan shall establish milestones for the achievement of required accessibility of key stations, consistent with the requirements of this section.

(e) A public entity wishing to apply for an extension of the July 26, 1993, deadline for key station accessibility shall include a request for an extension with its plan submitted to UMTA under paragraph (d) of this section. Extensions may be granted only with respect to key stations which need extraordinarily expensive structural changes to, or replacement of, existing facilities (e.g., installations of elevators, raising the entire passenger platform, or alterations of similar magnitude and cost). Requests for extensions shall provide for completion of key station accessibility within the time limits set forth in paragraph (c) of this section. The UMTA Administrator may approve, approve with conditions, modify, or disapprove any request for an extension.

§ 37.49 Designation of responsible person(s) for intercity and commuter rail stations.

(a) The responsible person(s) designated in accordance with this section shall bear the legal and financial responsibility for making a key station accessible in the same proportion as determined under this section.

(b) In the case of a station more than fifty percent of which is owned by a public entity, the public entity is the responsible party.

(c) In the case of a station more than fifty percent of which is owned by a private entity the persons providing commuter or intercity rail service to the station are the responsible parties, in a proportion equal to the percentage of all passenger boardings at the station attributable to the service of each, over the entire period during which the station is made accessible.

(d) In the case of a station of which no entity owns more than fifty percent, the owners of the station (other than private entity owners) and persons providing intercity or commuter rail service to the station are the responsible persons.

(1) Half the responsibility for the station shall be assumed by the owner(s) of the station. The owners shall share this responsibility in proportion to their ownership interest in the station, over the period during which the station is made accessible.

(2) The person(s) providing commuter or intercity rail service to the station shall assume the other half of the responsibility. These persons shall share this responsibility. These persons shall share this responsibility for the station in a proportion equal to the percentage of all passenger boardings at the station attributable to the service of each, over the period during which the station is made accessible.

(e) Persons who must share responsibility for station accessibility under paragraphs (c) and (d) of this section may, by agreement, allocate their responsibility in a manner different from that provided in this section.

§ 37.51 Key stations in commuter rail systems.

(a) The responsible person(s) shall make key stations on its system readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs. This requirement is separate from and in addition to requirements set forth in § 37.43 of this part.

(b) Each commuter authority shall determine which stations on its system are key stations. The commuter authority shall identify key stations, using the planning and public participation process set forth in paragraph (d) of this section, and taking into consideration the following criteria:

(1) Stations where passenger boardings exceed average station passenger boardings on the rail system by at least fifteen percent, unless such a station is close to another accessible station;

(2) Transfer stations on a rail line or between rail lines;

(3) Major interchange points with other transportation modes, including stations connecting with major parking facilities, bus terminals, intercity or commuter rail stations, passenger vessel terminals, or airports;

(4) End stations, unless an end station is close to another accessible station; and

(5) Stations serving major activity centers, such as employment or government centers, institutions of

higher education, hospitals or other major health care facilities, or other facilities that are major trip generators for individuals with disabilities.

(c)(1) Except as provided in this paragraph, the responsible person(s) shall achieve accessibility of key stations as soon as practicable, but in no case later than July 26, 1993.

(2) The UMTA Administrator may grant an extension of this deadline for key station accessibility for a period up to July 26, 2010. Extensions may be granted as provided in paragraph (e) of this section.

(d) The commuter authority and responsible person(s) for stations involved shall develop a plan for compliance for this section. This plan shall be completed and submitted to UMTA by July 26, 1992.

(1) The commuter authority and responsible person(s) shall consult with individuals with disabilities affected by the plan. The commuter authority and responsible person(s) also shall hold at least one public hearing on the plan and solicit comments on it. The plan shall document this public participation, including summaries of the consultation with individuals with disabilities and the comments received at the hearing and during the comment period. The plan also shall summarize the responsible person(s) responses to the comments and consultation.

(2) The plan shall establish milestones for the achievement of required accessibility of key stations, consistent with the requirements of this section.

(3) The commuter authority and responsible person(s) of each key station identified in the plan shall, by mutual agreement, designate a project manager for the purpose of undertaking the work of making the key station accessible.

(e) Any commuter authority and/or responsible person(s) wishing to apply for an extension of the July 26, 1993, deadline for key station accessibility shall include a request for extension with its plan submitted to under paragraph (d) of this section. Extensions may be granted only in a case where raising the entire passenger platform is the only means available of attaining accessibility or where other extraordinarily expensive structural changes (e.g., installations of elevators, or alterations of magnitude and cost similar to installing an elevator or raising the entire passenger platform) are necessary to attain accessibility. Requests for extensions shall provide for completion of key station accessibility within the time limits set forth in paragraph (c) of this section. The UMTA Administrator may approve,

approve with conditions, modify, or disapprove any request for an extension.

§ 37.53 Exception for New York and Philadelphia.

(a) The following agreements entered into in New York, New York, and Philadelphia, Pennsylvania, contain lists of key stations for the public entities that are a party to those agreements for those service lines identified in the agreements. The identification of key stations under these agreements is deemed to be in compliance with the requirements of this Subpart.

(1) Settlement Agreement by and among Eastern Paralyzed Veterans Association, Inc., James J. Peters, Terrance Moakley, and Denise Figueroa, individually and as representatives of the class of all persons similarly situated (collectively, "the EPVA class representatives"); and Metropolitan Transportation Authority, New York City Transit Authority, and Manhattan and Bronx Surface Transit Operating Authority (October 4, 1984).

(2) Settlement Agreement by and between Eastern Paralyzed Veterans Association of Pennsylvania, Inc., and James J. Peters, individually; and Dudley R. Sykes, as Commissioner of the Philadelphia Department of Public Property, and his successors in office and the City of Philadelphia (collectively "the City") and Southeastern Pennsylvania Transportation Authority (June 28, 1989).

(b) To comply with §§ 37.47 (b) and (d) or 37.51 (b) and (d) of this part, the entities named in the agreements are required to use their public participation and planning processes only to develop and submit to the UMTA Administrator plans for timely completion of key station accessibility, as provided in this subpart.

(c) In making accessible the key stations identified under the agreements cited in this section, the entities named in the agreements are subject to the requirements of § 37.9 of this part.

§ 37.55 Intercity rail station accessibility.

All intercity rail stations shall be made readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, as soon as practicable, but in no event later than July 26, 2010. This requirement is separate from and in addition to requirements set forth in § 37.43 of this part.

§ 37.57 Required cooperation.

An owner or person in control of an intercity or commuter rail station shall provide reasonable cooperation to the

responsible person(s) for that station with respect to the efforts of the responsible person to comply with the requirements of this subpart.

§ 37.59 Differences in accessibility completion dates.

Where different completion dates for accessible stations are established under this part for a station or portions of a station (e.g., extensions of different periods of time for a station which serves both rapid and commuter rail systems), accessibility to the following elements of the station shall be achieved by the earlier of the completion dates involved:

- (a) Common elements of the station;
- (b) Portions of the facility directly serving the rail system with the earlier completion date; and
- (c) An accessible path from common elements of the station to portions of the facility directly serving the rail system with the earlier completion date.

§ 37.61 Public transportation programs and activities in existing facilities.

(a) A public entity shall operate a designated public transportation program or activity conducted in an existing facility so that, when viewed in its entirety, the program or activity is readily accessible to and usable by individuals with disabilities.

(b) This section does not require a public entity to make structural changes to existing facilities in order to make the facilities accessible by individuals who use wheelchairs, unless and to the extent required by § 37.43 (with respect to alterations) or §§ 37.47 or 37.51 of this part (with respect to key stations). Entities shall comply with other applicable accessibility requirements for such facilities.

(c) Public entities, with respect to facilities that, as provided in paragraph (b) of this section, are not required to be made accessible to individuals who use wheelchairs, are not required to provide to such individuals services made available to the general public at such facilities when the individuals could not utilize or benefit from the services.

§§ 37.63-37.69 [Reserved]

Subpart D—Acquisition of Accessible Vehicles By Public Entities

§ 37.71 Purchase or lease of new non-rail vehicles by public entities operating fixed route systems.

(a) Except as provided elsewhere in this section, each public entity operating a fixed route system making a solicitation after August 25, 1990, to purchase or lease a new bus or other new vehicle for use on the system, shall

ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(b) A public entity may purchase or lease a new bus that is not readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, if it applies for, and the UMTA Administrator grants, a waiver as provided for in this section.

(c) Before submitting a request for such a waiver, the public entity shall hold at least one public hearing concerning the proposed request.

(d) The UMTA Administrator may grant a request for such a waiver if the public entity demonstrates to the UMTA Administrator's satisfaction that—

(1) The initial solicitation for new buses made by the public entity specified that all new buses were to be lift-equipped and were to be otherwise accessible to and usable by individuals with disabilities;

(2) Hydraulic, electromechanical, or other lifts for such new buses could not be provided by any qualified lift manufacturer to the manufacturer of such new buses in sufficient time to comply with the solicitation; and

(3) Any further delay in purchasing new buses equipped with such necessary lifts would significantly impair transportation services in the community served by the public entity.

(e) The public entity shall include with its waiver request a copy of the initial solicitation and written documentation from the bus manufacturer of its good faith efforts to obtain lifts in time to comply with the solicitation, and a full justification for the assertion that the delay in bus procurement needed to obtain a lift-equipped bus would significantly impair transportation services in the community. This documentation shall include a specific date at which the lifts could be supplied, copies of advertisements in trade publications and inquiries to trade associations seeking lifts, and documentation of the public hearing.

(f) Any waiver granted by the UMTA Administrator under this section shall be subject to the following conditions:

(1) The waiver shall apply only to the particular bus delivery to which the waiver request pertains;

(2) The waiver shall include a termination date, which will be based on information concerning when lifts will become available for installation on the new buses the public entity is purchasing. Buses delivered after this date, even though procured under a solicitation to which a waiver applied, shall be equipped with lifts;

(3) Any bus obtained subject to the waiver shall be capable of accepting a lift, and the public entity shall install a lift as soon as one becomes available;

(4) Such other terms and conditions as the UMTA Administrator may impose.

(g)(1) When the UMTA Administrator grants a waiver under this section, he/she shall promptly notify the appropriate committees of Congress.

(2) If the UMTA Administrator has reasonable cause to believe that a public entity fraudulently applied for a waiver under this section, the UMTA Administrator shall:

- (i) Cancel the waiver if it is still in effect; and
- (ii) Take other appropriate action.

§ 37.73 Purchase or lease of used non-rail vehicles by public entities operating fixed route systems.

(a) Except as provided elsewhere in this section, each public entity operating a fixed route system purchasing or leasing, after August 25, 1990, a used bus or other used vehicle for use on the system, shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(b) A public entity may purchase or lease a used vehicle for use on its fixed route system that is not readily accessible to and usable by individuals with disabilities if, after making demonstrated good faith efforts to obtain an accessible vehicle, it is unable to do so.

(c) Good faith efforts shall include at least the following steps:

(1) An initial solicitation for used vehicles specifying that all used vehicles are to be lift-equipped and otherwise accessible to and usable by individuals with disabilities, or, if an initial solicitation is not used, a documented communication so stating;

(2) A nationwide search for accessible vehicles, involving specific inquiries to used vehicle dealers and other transit providers; and

(3) Advertising in trade publications and contacting trade associations.

(d) Each public entity purchasing or leasing used vehicles that are not readily accessible to and usable by individuals with disabilities shall retain documentation of the specific good faith efforts it made for three years from the date the vehicles were purchased. These records shall be made available, on request, to the UMTA Administrator and the public.

§ 37.75 Remanufacture of non-rail vehicles and purchase or lease of remanufactured non-rail vehicles by public entities operating fixed route systems.

(a) This section applies to any public entity operating a fixed route system which takes one of the following actions:

(1) After August 25, 1990, remanufactures a bus or other vehicle so as to extend its useful life for five years or more or makes a solicitation for such remanufacturing; or

(2) Purchases or leases a bus or other vehicle which has been remanufactured so as to extend its useful life for five years or more, where the purchase or lease occurs after August 25, 1990, and during the period in which the useful life of the vehicle is extended.

(b) Vehicles acquired through the actions listed in paragraph (a) of this section shall, to the maximum extent feasible, be readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(c) For purposes of this section, it shall be considered feasible to remanufacture a bus or other motor vehicle so as to be readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless an engineering analysis demonstrates that including accessibility features required by this part would have a significant adverse effect on the structural integrity of the vehicle.

(d) If a public entity operates a fixed route system, any segment of which is included on the National Register of Historic Places, and if making a vehicle of historic character used solely on such segment readily accessible to and usable by individuals with disabilities would significantly alter the historic character of such vehicle, the public entity has only to make (or purchase or lease a remanufactured vehicle with) those modifications to make the vehicle accessible which do not alter the historic character of such vehicle, in consultation with the National Register of Historic Places.

(e) A public entity operating a fixed route system as described in paragraph (d) of this section may apply in writing to the UMTA Administrator for a determination of the historic character of the vehicle. The UMTA Administrator shall refer such requests to the National Register of Historic Places, and shall rely on its advice in making determinations of the historic character of the vehicle.

§ 37.77 Purchase or lease of new non-rail vehicles by public entities operating a demand responsive system for the general public.

(a) Except as provided in this section, a public entity operating a demand responsive system for the general public making a solicitation after August 25, 1990, to purchase or lease a new bus or other new vehicle for use on the system, shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(b) If the system, when viewed in its entirety, provides a level of service to individuals with disabilities, including individuals who use wheelchairs, equivalent to the level of service it provides to individuals without disabilities, it may purchase new vehicles that are not readily accessible to and usable by individuals with disabilities.

(c) For purposes of this section, a demand responsive system, when viewed in its entirety, shall be deemed to provide equivalent service if the service available to individuals with disabilities, including individuals who use wheelchairs, is provided in the most integrated setting appropriate to the needs of the individual and is equivalent to the service provided other individuals with respect to the following service characteristics:

- (1) Response time;
- (2) Fares;
- (3) Geographic area of service;
- (4) Hours and days of service;
- (5) Restrictions or priorities based on trip purpose;
- (6) Availability of information and reservations capability; and
- (7) Any constraints on capacity or service availability.

(d) A public entity receiving UMTA funds under section 18 or a public entity in a small urbanized area which receives UMTA funds under Section 9 from a state administering agency rather than directly from UMTA, which determines that its service to individuals with disabilities is equivalent to that provided other persons shall, before any procurement of an inaccessible vehicle, file with the appropriate state program office a certificate that it provides equivalent service meeting the standards of paragraph (c) of this section. Public entities operating demand responsive service receiving funds under any other section of the UMT Act shall file the certificate with the appropriate UMTA regional office. A public entity which does not receive UMTA funds shall make such a certificate and retain it in its files, subject to inspection on request of

UMTA. All certificates under this paragraph may be made and filed in connection with a particular procurement or in advance of a procurement; however, no certificate shall be valid for more than one year. A copy of the required certificate is found in appendix C to this part.

(e) The waiver mechanism set forth in § 37.71(b)-(g) (unavailability of lifts) of this subpart shall also be available to public entities operating a demand responsive system for the general public.

§ 37.79 Purchase or lease of new rail vehicles by public entities operating rapid or light rail systems.

Each public entity operating a rapid or light rail system making a solicitation after August 25, 1990, to purchase or lease a new rapid or light rail vehicle for use on the system shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

§ 37.81 Purchase or lease of used rail vehicles by public entities operating rapid or light rail systems.

(a) Except as provided elsewhere in this section, each public entity operating a rapid or light rail system which, after August 25, 1990, purchases or leases a used rapid or light rail vehicle for use on the system shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(b) A public entity may purchase or lease a used rapid or light rail vehicle for use on its rapid or light rail system that is not readily accessible to and usable by individuals if, after making demonstrated good faith efforts to obtain an accessible vehicle, it is unable to do so.

(c) Good faith efforts shall include at least the following steps:

(1) The initial solicitation for used vehicles made by the public entity specifying that all used vehicles were to be accessible to and usable by individuals with disabilities, or, if a solicitation is not used, a documented communication so stating;

(2) A nationwide search for accessible vehicles, involving specific inquiries to manufacturers and other transit providers; and

(3) Advertising in trade publications and contacting trade associations.

(d) Each public entity purchasing or leasing used rapid or light rail vehicles that are not readily accessible to and usable by individuals with disabilities shall retain documentation of the specific good faith efforts it made for three years from the date the vehicles

were purchased. These records shall be made available, on request, to the UMTA Administrator and the public.

§ 37.83 Remanufacture of rail vehicles and purchase or lease of remanufactured rail vehicles by public entities operating rapid or light rail systems.

(a) This section applies to any public entity operating a rapid or light rail system which takes one of the following actions:

(1) After August 25, 1990, remanufactures a light or rapid rail vehicle so as to extend its useful life for five years or more or makes a solicitation for such remanufacturing;

(2) Purchases or leases a light or rapid rail vehicle which has been remanufactured so as to extend its useful life for five years or more, where the purchase or lease occurs after August 25, 1990, and during the period in which the useful life of the vehicle is extended.

(b) Vehicles acquired through the actions listed in paragraph (a) of this section shall, to the maximum extent feasible, be readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(c) For purposes of this section, it shall be considered feasible to remanufacture a rapid or light rail vehicle so as to be readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless an engineering analysis demonstrates that doing so would have a significant adverse effect on the structural integrity of the vehicle.

(d) If a public entity operates a rapid or light rail system any segment of which is included on the National Register of Historic Places and if making a rapid or light rail vehicle of historic character used solely on such segment readily accessible to and usable by individuals with disabilities would significantly alter the historic character of such vehicle, the public entity need only make (or purchase or lease a remanufactured vehicle with) those modifications that do not alter the historic character of such vehicle.

(e) A public entity operating a fixed route system as described in paragraph (d) of this section may apply in writing to the UMTA Administrator for a determination of the historic character of the vehicle. The UMTA Administrator shall refer such requests to the National Register of Historic Places and shall rely on its advice in making a determination of the historic character of the vehicle.

§ 37.85 Purchase or lease of new intercity and commuter rail cars.

Amtrak or a commuter authority making a solicitation after August 25, 1990, to purchase or lease a new intercity or commuter rail car for use on the system shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

§ 37.87 Purchase or lease of used intercity and commuter rail cars.

(a) Except as provided elsewhere in this section, Amtrak or a commuter authority purchasing or leasing a used intercity or commuter rail car after August 25, 1990, shall ensure that the car is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(b) Amtrak or a commuter authority may purchase or lease a used intercity or commuter rail car that is not readily accessible to and usable by individuals if, after making demonstrated good faith efforts to obtain an accessible vehicle, it is unable to do so.

(c) Good faith efforts shall include at least the following steps:

(1) An initial solicitation for used vehicles specifying that all used vehicles accessible to and usable by individuals with disabilities;

(2) A nationwide search for accessible vehicles, involving specific inquiries to used vehicle dealers and other transit providers; and

(3) Advertising in trade publications and contacting trade associations.

(d) Amtrak and commuter authorities purchasing or leasing used intercity or commuter rail cars that are not readily accessible to and usable by individuals with disabilities shall retain documentation of the specific good faith efforts that were made for three years from the date the cars were purchased. These records shall be made available, to request, to the Federal Railroad Administration or UMTA Administrator, as applicable. These records shall be made available to the public, on request.

§ 37.89 Remanufacture of intercity and commuter rail cars and purchase or lease of remanufactured intercity and commuter rail cars.

(a) This section applies to Amtrak or a commuter authority which takes one of the following actions:

(1) Remanufactures an intercity or commuter rail car so as to extend its useful life for ten years or more;

(2) Purchases or leases an intercity or commuter rail car which has been remanufactured so as to extend its useful life for ten years or more.

(b) Intercity and commuter rail cars listed in paragraph (a) of this section shall, to the maximum extent feasible, be readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(c) For purposes of this section, it shall be considered feasible to remanufacture an intercity or commuter rail car so as to be readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless an engineering analysis demonstrates that remanufacturing the car to be accessible would have a significant adverse effect on the structural integrity of the car.

§ 37.91 Wheelchair locations and food service on intercity rail trains.

(a) As soon as practicable, but in no event later than July 26, 1995, each person providing intercity rail service shall provide on each train a number of spaces—

(1) To park wheelchairs (to accommodate individuals who wish to remain in their wheelchairs) equal to not less than one half of the number of single level rail passenger coaches in the train; and

(2) To fold and store wheelchairs (to accommodate individuals who wish to transfer to coach seats) equal to not less than one half the number of single level rail passenger coaches in the train.

(b) As soon as practicable, but in no event later than July 26, 2000, each person providing intercity rail service shall provide on each train a number of spaces—

(1) To park wheelchairs (to accommodate individuals who wish to remain in their wheelchairs) equal to not less than the total number of single level rail passenger coaches in the train; and

(2) To fold and store wheelchairs (to accommodate individuals who wish to transfer to coach seats) equal to not less than the total number of single level rail passenger coaches in the train.

(c) In complying with paragraphs (a) and (b) of this section, a person providing intercity rail service may not provide more than two spaces to park wheelchairs nor more than two spaces to fold and store wheelchairs in any one coach or food service car.

(d) Unless not practicable, a person providing intercity rail transportation shall place an accessible car adjacent to the end of a single level dining car through which an individual who uses a wheelchair may enter.

(e) On any train in which either a single level or bi-level dining car is used to provide food service, a person providing intercity rail service shall

provide appropriate aids and services to ensure that equivalent food service is available to individuals with disabilities, including individuals who use wheelchairs, and to passengers traveling with such individuals. Appropriate auxiliary aids and services include providing a hard surface on which to eat.

(f) This section does not require the provision of securement devices on intercity rail cars.

§ 37.93 One car per train rule.

(a) The definition of accessible for purposes of meeting the one car per train rule is spelled out in the applicable subpart for each transportation system type in part 38 of this title.

(b) Each person providing intercity rail service and each commuter rail authority shall ensure that, as soon as practicable, but in no event later than July 26, 1995, that each train has one car that is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(c) Each public entity providing light or rapid rail service shall ensure that each train, consisting of two or more vehicles, includes at least one car that is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, as soon as practicable but in no case later than July 25, 1995.

§ 37.95 Ferries and other passenger vessels operated by public entities. [Reserved]

§§ 37.97-37.99 [Reserved]

Subpart E—Acquisition of Accessible Vehicles by Private Entities

§ 37.101 Purchase or lease of vehicles by private entities not primarily engaged in the business of transporting people.

(a) *Application.* This section applies to all purchases or leases of vehicles by private entities which are not primarily engaged in the business of transporting people, in which a solicitation for the vehicle is made after August 25, 1990.

(b) *Fixed Route System. Vehicle Capacity Over 16.* If the entity operates a fixed route system and purchases or leases a vehicle with a seating capacity of over 16 passengers (including the driver) for use on the system, it shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(c) *Fixed Route System. Vehicle Capacity of 16 or Fewer.* If the entity operates a fixed route system and purchases or leases a vehicle with a

seating capacity of 16 or fewer passengers (including the driver) for use on the system, it shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless the system, when viewed in its entirety, meets the standard for equivalent service of § 37.105 of this part.

(d) *Demand Responsive System. Vehicle Capacity Over 16.* If the entity operates a demand responsive system, and purchases or leases a vehicle with a seating capacity of over 16 passengers (including the driver) for use on the system, it shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless the system, when viewed in its entirety, meets the standard for equivalent service of § 37.105 of this part.

§ 37.103 Purchase or lease of new non-rail vehicles by private entities primarily engaged in the business of transporting people.

(a) *Application.* This section applies to all acquisitions of new vehicles by private entities which are primarily engaged in the business of transporting people and whose operations affect commerce, in which a solicitation for the vehicle is made (except as provided in paragraph (d) of this section) after August 25, 1990.

(b) *Fixed Route Systems.* If the entity operates a fixed route system, and purchases or leases a new vehicle other than an automobile, a van with a seating capacity of less than eight persons (including the driver), or an over-the-road bus, it shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs.

(c) *Demand Responsive Systems.* If the entity operates a demand responsive system, and purchases or leases a new vehicle other than an automobile, a van with a seating capacity of less than eight persons (including the driver), or an over-the-road bus, it shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless the system, when viewed in its entirety, meets the standard for equivalent service of § 37.105 of this part.

(d) *Vans with a Capacity of Fewer than 8 Persons.* If the entity operates either a fixed route or demand responsive system, and purchases or leases a new van with a seating capacity of fewer than eight persons including the driver (the solicitation for the vehicle being made after February

25, 1992), the entity shall ensure that the vehicle is readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless the system, when viewed in its entirety, meets the standard for equivalent service of § 37.105 of this part.

§ 37.105 Equivalent service standard.

For purposes of §§ 37.101 and 37.103 of this part, a fixed route system or demand responsive system, when viewed in its entirety, shall be deemed to provide equivalent service if the service available to individuals with disabilities, including individuals who use wheelchairs, is provided in the most integrated setting appropriate to the needs of the individual and is equivalent to the service provided other individuals with respect to the following service characteristics:

(a) (1) Schedules/headways (if the system is fixed route);

(2) Response time (if the system is demand responsive);

(b) Fares;

(c) Geographic area of service;

(d) Hours and days of service;

(e) Availability of information;

(f) Reservations capability (if the system is demand responsive);

(g) Any constraints on capacity or service availability;

(h) Restrictions/priorities based on trip purpose (if the system is demand responsive).

§ 37.107 Acquisition of passenger rail cars by private entities primarily engaged in the business of transporting people.

(a) A private entity which is primarily engaged in the business of transporting people and whose operations affect commerce, which makes a solicitation after February 25, 1992, to purchase or lease a new rail passenger car to be used in providing specified public transportation, shall ensure that the car is readily accessible to, and usable by, individuals with disabilities, including individuals who use wheelchairs. The accessibility standards in part 38 of this title which apply depend upon the type of service in which the car will be used.

(b) Except as provided in paragraph (c) of this section, a private entity which is primarily engaged in transporting people and whose operations affect commerce, which remanufactures a rail passenger car to be used in providing specified public transportation to extend its useful life for ten years or more, or purchases or leases such a remanufactured rail car, shall ensure that the rail car, to the maximum extent feasible, is made readily accessible to

and usable by individuals with disabilities, including individuals who use wheelchairs. For purposes of this paragraph, it shall be considered feasible to remanufacture a rail passenger car to be readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs, unless an engineering analysis demonstrates that doing so would have a significant adverse effect on the structural integrity of the car.

(c) Compliance with paragraph (b) of this section is not required to the extent that it would significantly alter the historic or antiquated character of a historic or antiquated rail passenger car, or a rail station served exclusively by such cars, or would result in the violation of any rule, regulation, standard or order issued by the Secretary under the Federal Railroad Safety Act of 1970. For purposes of this section, a historic or antiquated rail passenger car means a rail passenger car—

(1) Which is not less than 30 years old at the time of its use for transporting individuals;

(2) The manufacturer of which is no longer in the business of manufacturing rail passenger cars; and

(3) Which—

(i) Has a consequential association with events or persons significant to the past; or

(ii) Embodies, or is being restored to embody, the distinctive characteristics of a type of rail passenger car used in the past, or to represent a time period which has passed.

§ 37.109 Ferries and other passenger vessels operated by private entities.
[Reserved]

§ 37.111-37.119 [Reserved]

Subpart F—Paratransit as a Complement to Fixed Route Service

§ 37.121 Requirement for comparable complementary paratransit service.

(a) Except as provided in paragraph (c) of this section, each public entity operating a fixed route system shall provide paratransit or other special service to individuals with disabilities that is comparable to the level of service provided to individuals without disabilities who use the fixed route system.

(b) To be deemed comparable to fixed route service, a complementary paratransit system shall meet the requirements of §§ 37.123-37.133 of this subpart. The requirement to comply with § 37.131 may be modified in accordance with the provisions of this subpart relating to undue financial burden.

(c) Requirements for complementary paratransit do not apply to commuter bus, commuter rail, or intercity rail systems.

§ 37.123 ADA paratransit eligibility: Standards.

(a) Public entities required by § 37.121 of this subpart to provide complementary paratransit service shall provide the service to the ADA paratransit eligible individuals described in paragraph (e) of this section.

(b) If an individual meets the eligibility criteria of this section with respect to some trips but not others, the individual shall be ADA paratransit eligible only for those trips for which he or she meets the criteria.

(c) Individuals may be ADA paratransit eligible on the basis of a permanent or temporary disability.

(d) Public entities may provide complementary paratransit service to persons other than ADA paratransit eligible individuals. However, only the cost of service to ADA paratransit eligible individuals may be considered in a public entity's request for an undue financial burden waiver under §§ 37.151-37.155 of this part.

(e) The following individuals are ADA paratransit eligible:

(1) Any individual with a disability who is unable, as the result of a physical or mental impairment (including a vision impairment), and without the assistance of another individual (except the operator of a wheelchair lift or other boarding assistance device), to board, ride, or disembark from any vehicle on the system which is readily accessible to and usable by individuals with disabilities.

(2) Any individual with a disability who needs the assistance of a wheelchair lift or other boarding assistance device and is able, with such assistance, to board, ride and disembark from any vehicle which is readily accessible to and usable by individuals with disabilities if the individual wants to travel on a route on the system during the hours of operation of the system at a time, or within a reasonable period of such time, when such a vehicle is not being used to provide designated public transportation on the route.

(i) An individual is eligible under this paragraph with respect to travel on an otherwise accessible route on which the boarding or disembarking location which the individual would use is one at which boarding or disembarking from the vehicle is precluded as provided in § 37.167(g) of this part.

(ii) An individual using a common wheelchair is eligible under this

paragraph if the individual's wheelchair cannot be accommodated on an existing vehicle (e.g., because the vehicle's lift does not meet the standards of part 38 of this title), even if that vehicle is accessible to other individuals with disabilities and their mobility wheelchairs.

(iii) With respect to rail systems, an individual is eligible under this paragraph if the individual could use an accessible rail system, but—

(A) there is not yet one accessible car per train on the system; or

(B) key stations have not yet been made accessible.

(3) Any individual with a disability who has a specific impairment-related condition which prevents such individual from traveling to a boarding location or from a disembarking location on such system.

(i) Only a specific impairment-related condition which prevents the individual from traveling to a boarding location or from a disembarking location is a basis for eligibility under this paragraph. A condition which makes traveling to boarding location or from a disembarking location more difficult for a person with a specific impairment-related condition than for an individual who does not have the condition, but does not prevent the travel, is not a basis for eligibility under this paragraph.

(ii) Architectural barriers not under the control of the public entity providing fixed route service and environmental barriers (e.g., distance, terrain, weather) do not, standing alone, form a basis for eligibility under this paragraph. The interaction of such barriers with an individual's specific impairment-related condition may form a basis for eligibility under this paragraph, if the effect is to prevent the individual from traveling to a boarding location or from a disembarking location.

(f) Individuals accompanying an ADA paratransit eligible individual shall be provided service as follows:

(1) One other individual accompanying the ADA paratransit eligible individual shall be provided service—

(i) If the ADA paratransit eligible individual is traveling with a personal care attendant, the entity shall provide service to one other individual in addition to the attendant who is accompanying the eligible individual;

(ii) A family member or friend is regarded as a person accompanying the eligible individual, and not as a personal care attendant, unless the family member or friend registered is acting in the capacity of a personal care attendant;

(2) Additional individuals accompanying the ADA paratransit eligible individual shall be provided service, provided that space is available for them on the paratransit vehicle carrying the ADA paratransit eligible individual and that transportation of the additional individuals will not result in a denial of service to ADA paratransit eligible individuals;

(3) In order to be considered as "accompanying" the eligible individual for purposes of this paragraph (f), the other individual(s) shall have the same origin and destination as the eligible individual.

§ 37.125 ADA paratransit eligibility: Process.

Each public entity required to provide complementary paratransit service by § 37.121 of this part shall establish a process for determining ADA paratransit eligibility.

(a) The process shall strictly limit ADA paratransit eligibility to individuals specified in § 37.123 of this part.

(b) All information about the process, materials necessary to apply for eligibility, and notices and determinations concerning eligibility shall be made available in accessible formats, upon request.

(c) If, by a date 21 days following the submission of a complete application, the entity has not made a determination of eligibility, the applicant shall be treated as eligible and provided service until and unless the entity denies the application.

(d) The entity's determination concerning eligibility shall be in writing. If the determination is that the individual is ineligible, the determination shall state the reasons for the finding.

(e) The public entity shall provide documentation to each eligible individual stating that he or she is "ADA Paratransit Eligible." The documentation shall include the name of the eligible individual, the name of the transit provider, the telephone number of the entity's paratransit coordinator, an expiration date for eligibility, and any conditions or limitations on the individual's eligibility including the use of a personal care attendant.

(f) The entity may require recertification of the eligibility of ADA paratransit eligible individuals at reasonable intervals.

(g) The entity shall establish an administrative appeal process through which individuals who are denied eligibility can obtain review of the denial.

(1) The entity may require that an appeal be filed within 60 days of the denial of an individual's application.

(2) The process shall include an opportunity to be heard and to present information and arguments, separation of functions (i.e., a decision by a person not involved with the initial decision to deny eligibility), and written notification of the decision, and the reasons for it.

(3) The entity is not required to provide paratransit service to the individual pending the determination on appeal. However, if the entity has not made a decision within 30 days of the completion of the appeal process, the entity shall provide paratransit service from that time until and unless a decision to deny the appeal is issued.

(h) The entity may establish an administrative process to suspend, for a reasonable period of time, the provision of complementary paratransit service to ADA eligible individuals who establish a pattern or practice of missing scheduled trips.

(1) Trips missed by the individual for reasons beyond his or her control (including, but not limited to, trips which are missed due to operator error) shall not be a basis for determining that such a pattern or practice exists.

(2) Before suspending service, the entity shall take the following steps:

(i) Notify the individual in writing that the entity proposes to suspend service, citing with specificity the basis of the proposed suspension and setting forth the proposed sanction.

(ii) Provide the individual an opportunity to be heard and to present information and arguments;

(iii) Provide the individual with written notification of the decision and the reasons for it.

(3) The appeals process of paragraph (g) of this section is available to an individual on whom sanctions have been imposed under this paragraph. The sanction is stayed pending the outcome of the appeal.

(i) In applications for ADA paratransit eligibility, the entity may require the applicant to indicate whether or not he or she travels with a personal care attendant.

§ 37.127 Complementary paratransit service for visitors.

(a) Each public entity required to provide complementary paratransit service under § 37.121 of this part shall make the service available to visitors as provided in this section.

(b) For purposes of this section, a visitor is an individual with disabilities who does not reside in the jurisdiction(s) served by the public entity or other entities with which the

public entity provides coordinated complementary paratransit service within a region.

(c) Each public entity shall treat as eligible for its complementary paratransit service all visitors who present documentation that they are ADA paratransit eligible, under the criteria of § 37.125 of this part, in the jurisdiction in which they reside.

(d) With respect to visitors with disabilities who do not present such documentation, the public entity may require the documentation of the individual's place of residence and, if the individual's disability is not apparent, of his or her disability. The entity shall provide paratransit service to individuals with disabilities who qualify as visitors under paragraph (b) of this section. The entity shall accept a certification by such individuals that they are unable to use fixed route transit.

(e) A public entity is not required to provide service to a visitor for more than 21 days from the date of the first paratransit trip used by the visitor. The entity may require that such an individual, in order to receive service beyond this period, apply for eligibility under the process provided for in § 37.125 of this part.

§ 37.129 Types of service.

(a) Except as provided in this section, complementary paratransit service for ADA paratransit eligible persons shall be origin-to-destination service.

(b) Complementary paratransit service for ADA paratransit eligible persons described in § 37.123(e)(2) of this part may also be provided by on-call bus service or paratransit feeder service to an accessible fixed route, where such service enables the individual to use the fixed route bus system for his or her trip.

(c) Complementary paratransit service for ADA eligible persons described in § 37.123(e)(3) of this part also may be provided by paratransit feeder service to and/or from an accessible fixed route.

§ 37.131 Service criteria for complementary paratransit.

The following service criteria apply to complementary paratransit required by § 37.121 of this part.

(a) *Service Area*—(1) *Bus*. (i) The entity shall provide complementary paratransit service to origins and destinations within corridors with a width of three-fourths of a mile on each side of each fixed route. The corridor shall include an area with a three-

fourths of a mile radius at the ends of each fixed route.

(ii) Within the core service area, the entity also shall provide service to small areas not inside any of the corridors but which are surrounded by corridors.

(iii) Outside the core service area, the entity may designate corridors with widths from three fourths of a mile up to one and one half miles on each side of a fixed route, based on local circumstances.

(iv) For purposes of this paragraph, the core service area is that area in which corridors with a width of three-fourths of a mile on each side of each fixed route merge together such that, with few and small exceptions, all origins and destinations within the area would be served.

(2) *Rail.* (i) For rail systems, the service area shall consist of a circle with a radius of $\frac{1}{4}$ of a mile around each station.

(ii) At end stations and other stations in outlying areas, the entity may designate circles with radii of up to $1\frac{1}{2}$ miles as part of its service area, based on local circumstances.

(3) Jurisdictional Boundaries.

Notwithstanding any other provision of this paragraph, an entity is not required to provide paratransit service in an area outside the boundaries of the jurisdiction(s) in which it operates, if the entity does not have legal authority to operate in that area. The entity shall take all practicable steps to provide paratransit service to any part of its service area.

(b) *Response Time.* The entity shall schedule and provide paratransit service to any ADA paratransit eligible person at any requested time on a particular day in response to a request for service made the previous day. Reservations may be taken by reservation agents or by mechanical means.

(1) The entity shall make reservation service available during at least all normal business hours of the entity's administrative offices, as well as during times, comparable to normal business hours, on a day when the entity's offices are not open before a service day.

(2) The entity may negotiate pickup times with the individual, but the entity shall not require an ADA paratransit eligible individual to schedule a trip to begin more than one hour before or after the individual's desired departure time.

(3) The entity may use real-time scheduling in providing complementary paratransit service.

(4) The entity shall permit advance reservations to be made up to 14 days in advance of an ADA paratransit eligible individual's desired trip.

(c) *Fares.* The fare for a trip charged to an ADA paratransit eligible user of the complementary paratransit service shall not exceed twice the fare that would be charged to an individual paying full fare (i.e., without regard to discounts) for a trip of similar length, at a similar time of day, on the entity's fixed route system.

(1) In calculating the full fare that would be paid by an individual using the fixed route system, the entity may include transfer and premium charges applicable to a trip of similar length, at a similar time of day, on the fixed route system.

(2) The fares for individuals accompanying ADA paratransit eligible individuals, who are provided service under § 37.123 (f) of this part, shall be the same as for the ADA paratransit eligible individuals they are accompanying.

(3) A personal care attendant shall not be charged for complementary paratransit service.

(4) The entity may charge a fare higher than otherwise permitted by this paragraph to a social service agency or other organization for agency trips (i.e., trips guaranteed to the organization).

(d) *Trip Purpose Restrictions.* The entity shall not impose restrictions or priorities based on trip purpose.

(e) *Hours and Days of Service.* The complementary paratransit service shall be available throughout the same hours and days as the entity's fixed route service.

(f) *Capacity Constraints.* The entity shall not limit the availability of complementary paratransit service to ADA paratransit eligible individuals by any of the following:

(1) Restrictions on the number of trips an individual will be provided;

(2) Waiting lists for access to the service; or

(3) Any operational pattern or practice that significantly limits the availability of service to ADA paratransit eligible persons.

(i) Such patterns or practices include, but are not limited to, the following:

(A) Substantial numbers of significantly untimely pickups for initial or return trips;

(B) Substantial numbers of trip denials or missed trips;

(C) Substantial numbers of trips with excessive trip lengths.

(ii) Operational problems attributable to causes beyond the control of the entity (including, but not limited to, weather or traffic conditions affecting all vehicular traffic that were not anticipated at the time a trip was scheduled) shall not be a basis for

determining that such a pattern or practice exists.

(g) *Additional Service.* Public entities may provide complementary paratransit service to ADA paratransit eligible individuals exceeding that provided for in this section. However, only the cost of service provided for in this section may be considered in a public entity's request for an undue financial burden waiver under §§ 37.151–37.155 of this part.

§ 37.133 Subscription service.

(a) This part does not prohibit the use of subscription service by public entities as part of a complementary paratransit system, subject to the limitations in this section.

(b) Subscription service may not absorb more than fifty percent of the number of trips available at a given time of day, unless there is non-subscription capacity.

(c) Notwithstanding any other provision of this part, the entity may establish waiting lists or other capacity constraints and trip purpose restrictions or priorities for participation in the subscription service only.

§ 37.135 Submission of paratransit plan.

(a) *General.* Each public entity operating fixed route transportation service, which is required by § 37.121 to provide complementary paratransit service, shall develop a paratransit plan.

(b) *Initial Submission.* Except as provided in § 37.141 of this part, each entity shall submit its initial plan for compliance with the complementary paratransit service provision by January 26, 1992, to the appropriate location identified in paragraph (f) of this section.

(c) *Annual Updates.* Each entity shall submit an annual update to the plan on January 26 of each succeeding year.

(d) *Phase-in of Implementation.* Each plan shall provide full compliance by no later than January 26, 1997, unless the entity has received a waiver based on undue financial burden. If the date for full compliance specified in the plan is after January 26, 1993, the plan shall include milestones, providing for measured, proportional progress toward full compliance.

(e) *Plan Implementation.* Each entity shall begin implementation of its plan on January 26, 1992.

(f) *Submission Locations.* An entity shall submit its plan to one of the following offices, as appropriate:

(1) The individual state administering agency, if it is—

(i) A section 18 recipient;

(ii) A small urbanized area recipient of section 9 funds administered by the State;

(iii) A participant in a coordinated plan, in which all of the participating entities are eligible to submit their plans to the State; or

(2) The UMTA Regional Office (as listed in Appendix B to this part) for all other entities required to submit a paratransit plan. This includes an UMTA recipient under section 9 of the UMT Act; entities submitting a joint plan (unless they meet the requirements of paragraph (f)(1)(iii) of this section), and a public entity not an UMT Act recipient.

§ 37.137 Paratransit plan development.

(a) *Survey of existing services.* Each submitting entity shall survey the area to be covered by the plan to identify any person or entity (public or private) which provides a paratransit or other special transportation service for ADA paratransit eligible individuals in the service area to which the plan applies.

(b) *Public participation.* Each submitting entity shall ensure public participation in the development of its paratransit plan, including at least the following:

(1) *Outreach.* Each submitting entity shall solicit participation in the development of its plan by the widest range of persons anticipated to use its paratransit service. Each entity shall develop contacts, mailing lists and other appropriate means for notification of opportunities to participate in the development of the paratransit plan;

(2) *Consultation with individuals with disabilities.* Each entity shall contact individuals with disabilities and groups representing them in the community. Consultation shall begin at an early stage in the plan development and should involve persons with disabilities in all phases of plan development. All documents and other information concerning the planning procedure and the provision of service shall be available, upon request, to members of the public, except where disclosure would be an unwarranted invasion of personal privacy;

(3) *Opportunity for public comment.* The submitting entity shall make its plan available for review before the plan is finalized. In making the plan available for public review, the entity shall ensure that the plan is available upon request in accessible formats;

(4) *Public hearing.* The entity shall sponsor at a minimum one public hearing and shall provide adequate notice of the hearing, including advertisement in appropriate media, such as newspapers of general and

special interest circulation and radio announcements; and

(5) *Special requirements.* If the entity intends to phase-in its paratransit service over a multi-year period, or request a waiver based on undue financial burden, the public hearing shall afford the opportunity for interested citizens to express their views concerning the phase-in, the request, and which service criteria may be delayed in implementation.

(c) *Ongoing requirement.* The entity shall create an ongoing mechanism for the participation of individuals with disabilities in the continued development and assessment of services to persons with disabilities. This includes, but is not limited to, the development of the initial plan, any request for an undue financial burden waiver, and each annual submission.

§ 37.139 Plan contents.

Each plan shall contain the following information:

(a) Identification of the entity or entities submitting the plan, specifying for each—

(1) Name and address; and
(2) Contact person for the plan, with telephone number and facsimile telephone number (FAX), if applicable.

(b) A description of the fixed route system as of January 26, 1992 (or subsequent year for annual updates), including—

(1) A description of the service area, route structure, days and hours of service, fare structure, and population served. This includes maps and tables, if appropriate;

(2) The total number of vehicles (bus, van, or rail) operated in fixed route service (including contracted service), and percentage of accessible vehicles and percentage of routes accessible to and usable by persons with disabilities, including persons who use wheelchairs;

(3) Any other information about the fixed route service that is relevant to establishing the basis for comparability of fixed route and paratransit service.

(c) A description of existing paratransit services, including:

(1) An inventory of service provided by the public entity submitting the plan;

(2) An inventory of service provided by other agencies or organizations, which may in whole or in part be used to meet the requirement for complementary paratransit service; and

(3) A description of the available paratransit services in paragraphs (c)(2) and (c)(3) of this section as they relate to the service criteria described in § 37.131 of this part of service area, response time, fares, restrictions on trip purpose, hours and days of service, and

capacity constraints; and to the requirements of ADA paratransit eligibility.

(d) A description of the plan to provide comparable paratransit, including:

(1) An estimate of demand for comparable paratransit service by ADA eligible individuals and a brief description of the demand estimation methodology used;

(2) An analysis of differences between the paratransit service currently provided and what is required under this part by the entity(ies) submitting the plan and other entities, as described in paragraph (c) of this section;

(3) A brief description of planned modifications to existing paratransit and fixed route service and the new paratransit service planned to comply with the ADA paratransit service criteria;

(4) A description of the planned comparable paratransit service as it relates to each of the service criteria described in § 37.131 of this part—service area, absence of restrictions or priorities based on trip purpose, response time, fares, hours and days of service, and lack of capacity constraints. If the paratransit plan is to be phased in, this paragraph shall be coordinated with the information being provided in paragraphs (d)(5) and (d)(6) of this paragraph;

(5) A timetable for implementing comparable paratransit service, with a specific date indicating when the planned service will be completely operational. In no case may full implementation be completed later than January 26, 1997. The plan shall include milestones for implementing phases of the plan, with progress that can be objectively measured yearly;

(6) A budget for comparable paratransit service, including capital and operating expenditures over five years.

(e) A description of the process used to certify individuals with disabilities as ADA paratransit eligible. At a minimum, this must include—

(1) A description of the application and certification process, including—

(i) The availability of information about the process and application materials in accessible formats;

(ii) The process for determining eligibility according to the provisions of §§ 37.123–37.125 of this part and notifying individuals of the determination made;

(iii) The entity's system and timetable for processing applications and allowing presumptive eligibility; and

(iv) The documentation given to eligible individuals.

(2) A description of the administrative appeals process for individuals denied eligibility.

(3) A policy for visitors, consistent with § 37.127 of this part.

(f) Description of the public participation process including—

(1) Notice given of opportunity for public comment, the date(s) of completed public hearing(s), availability of the plan in accessible formats, outreach efforts, and consultation with persons with disabilities.

(2) A summary of significant issues raised during the public comment period, along with a response to significant comments and discussion of how the issues were resolved.

(g) Efforts to coordinate service with other entities subject to the complementary paratransit requirements of this part which have overlapping or contiguous service areas or jurisdictions.

(h) The following endorsements or certifications:

(1) A resolution adopted by the board of the entity authorizing the plan, as submitted. If more than one entity is submitting the plan there must be an authorizing resolution from each board. If the entity does not function with a board, a statement shall be submitted by the entity's chief executive;

(2) In urbanized areas, certification by the Metropolitan Planning Organization (MPO) that it has reviewed the plan and that the plan is in conformance with the transportation plan developed under the Urban Mass Transportation/Federal Highway Administration joint planning regulation (49 CFR part 613 and 23 CFR part 450). In a service area which is covered by more than one MPO, each applicable MPO shall certify conformity of the entity's plan. The provisions of this paragraph do not apply to non-UMTA recipients;

(3) A certification that the survey of existing paratransit service was conducted as required in § 37.137(a) of this part;

(4) To the extent service provided by other entities is included in the entity's plan for comparable paratransit service, the entity must certify that:

(i) ADA paratransit eligible individuals have access to the service;

(ii) The service is provided in the manner represented; and

(iii) Efforts will be made to coordinate the provision of paratransit service by other providers.

(i) A request for a waiver based on undue financial burden, if applicable. The waiver request should include information sufficient for UMTA to

consider the factors in § 37.155 of this part. If a request for an undue financial burden waiver is made, the plan must include a description of additional paratransit services that would be provided to achieve full compliance with the requirement for comparable paratransit in the event the waiver is not granted, and the timetable for the implementation of these additional services.

(j) *Annual plan updates.* (1) The annual plan updates submitted January 26, 1993, and annually thereafter, shall include information necessary to update the information requirements of this section. Information submitted annually must include all significant changes and revisions to the timetable for implementation;

(2) If the paratransit service is being phased in over more than one year, the entity must demonstrate that the milestones identified in the current paratransit plans have been achieved. If the milestones have not been achieved, the plan must explain any slippage and what actions are being taken to compensate for the slippage.

(3) The annual plan must describe specifically the means used to comply with the public participation requirements, as described in § 37.137 of this part.

§ 37.141 Requirements for a joint paratransit plan.

(a) Two or more entities with overlapping or contiguous service areas or jurisdictions may develop and submit a joint plan providing for coordinated paratransit service. Joint plans shall identify the participating entities and indicate their commitment to participate in the plan.

(b) To the maximum extent feasible, all elements of the coordinated plan shall be submitted on January 26, 1992. If a coordinated plan is not completed by January 26, 1992, those entities intending to coordinate paratransit service must submit a general statement declaring their intention to provide coordinated service and each element of the plan specified in § 37.139 to the extent practicable. In addition, the plan must include the following certifications from each entity involved in the coordination effort:

(1) A certification that the entity is committed to providing ADA paratransit service as part of a coordinated plan.

(2) A certification from each public entity participating in the plan that it will maintain current levels of paratransit service until the coordinated plan goes into effect.

(c) Entities submitting the above certifications and plan elements in lieu

of a completed plan on January 26, 1992, must submit a complete plan by July 26, 1992.

(d) Filing of an individual plan does not preclude an entity from cooperating with other entities in the development or implementation of a joint plan. An entity wishing to join with other entities after its initial submission may do so by meeting the filing requirements of this section.

§ 37.143 Paratransit plan implementation.

(a) Each entity shall begin implementation of its complementary paratransit plan, pending notice from UMTA. The implementation of the plan shall be consistent with the terms of the plan, including any specified phase-in period.

(b) If the plan contains a request for a waiver based on undue financial burden, the entity shall begin implementation of its plan, pending a determination on its waiver request.

§ 37.145 State comment on plans.

Each state required to receive plans under § 37.135 of this part shall:

(a) Ensure that all applicable section 18 and section 9 recipients have submitted plans.

(b) Certify to UMTA that all plans have been received.

(c) Forward the required certification with comments on each plan to UMTA. The plans, with comments, shall be submitted to UMTA no later than April 1, 1992, for the first year and April 1 annually thereafter.

(d) The State shall develop comments to on each plan, responding to the following points:

(1) Was the plan filed on time?

(2) Does the plan appear reasonable?

(3) Are there circumstances that bear on the ability of the grantee to carry out the plan as represented? If yes, please elaborate.

(4) Is the plan consistent with statewide planning activities?

(5) Are the necessary anticipated financial and capital resources identified in the plan accurately estimated?

§ 37.147 Considerations during UMTA review.

In reviewing each plan, at a minimum UMTA will consider the following:

(a) Whether the plan was filed on time;

(b) Comments submitted by the state, if applicable;

(c) Whether the plan contains responsive elements for each component required under § 37.139 of this part;

(d) Whether the plan, when viewed in its entirety, provides for paratransit service comparable to the entity's fixed route service;

(e) Whether the entity complied with the public participation efforts required by this part; and

(f) The extent to which efforts were made to coordinate with other public entities with overlapping or contiguous service areas or jurisdictions.

§ 37.149 Disapproved plans.

(a) If a plan is disapproved in whole or in part, UMTA will specify which provisions are disapproved. Each entity shall amend its plan consistent with this information and resubmit the plan to the appropriate UMTA Regional Office within 90 days of receipt of the disapproval letter.

(b) Each entity revising its plan shall continue to comply with the public participation requirements applicable to the initial development of the plan (set out in § 37.137 of this part).

§ 37.151 Waiver for undue financial burden.

If compliance with the service criteria of § 37.131 of this part creates an undue financial burden, an entity may request a waiver from all or some of the provisions if the entity has complied with the public participation requirements in § 37.137 of this Part and if the following conditions apply:

(a) At the time of submission of the initial plan on January 26, 1992—

(1) The entity determines that it cannot meet all of the service criteria by January 26, 1997; or

(2) The entity determines that it cannot make measured progress toward compliance in any year before full compliance is required. For purposes of this part, measured progress means implementing milestones as scheduled, such as incorporating an additional paratransit service criterion or improving an aspect of a specific service criterion.

(b) At the time of its annual plan update submission, if the entity believes that circumstances have changed since its last submission, and it is no longer able to comply by January 26, 1997, or make measured progress in any year before 1997, as described in paragraph (a)(2) of this section.

§ 37.153 UMTA waiver determination.

(a) The Administrator will determine whether to grant a waiver for undue financial burden on a case-by-case basis, after considering the factors identified in § 37.155 of this part and the information accompanying the request. If necessary, the Administrator will

return the application with a request for additional information.

(b) Any waiver granted will be for a limited and specified period of time.

(c) If the Administrator grants the applicant a waiver, the Administrator will do one of the following:

(1) Require the public entity to provide complementary paratransit to the extent it can do so without incurring an undue financial burden. The entity shall make changes in its plan that the Administrator determines are appropriate to maximize the complementary paratransit service that is provided to ADA paratransit eligible individuals. When making changes to its plan, the entity shall use the public participation process specified for plan development and shall consider first a reduction in number of trips provided to each ADA paratransit eligible person per month, while attempting to meet all other service criteria.

(2) Require the public entity to provide basic complementary paratransit services to all ADA paratransit eligible individuals, even if doing so would cause the public entity to incur an undue financial burden. Basic complementary paratransit service in corridors defined as provided in § 37.131(a) along the public entity's key routes during core service hours.

(i) For purposes of this section, key routes are defined as routes along which there is service at least hourly throughout the day.

(ii) For purposes of this section, core service hours encompass at least peak periods, as these periods are defined locally for fixed route service, consistent with industry practice.

(3) If the Administrator determines that the public entity will incur an undue financial burden as the result of providing basic complementary paratransit service, such that it is infeasible for the entity to provide basic complementary paratransit service, the Administrator shall require the public entity to coordinate with other available providers of demand responsive service in the area served by the public entity to maximize the service to ADA paratransit eligible individuals to the maximum extent feasible.

§ 37.155 Factors in decision to grant an undue financial burden waiver.

(a) In making an undue financial burden determination, the UMTA Administrator will consider the following factors:

(1) Effects on current fixed route service, including reallocation of accessible fixed route vehicles and potential reduction in service, measured by service miles;

(2) Average number of trips made by the entity's general population, on a per capita basis, compared with the average number of trips to be made by registered ADA paratransit eligible persons, on a per capita basis;

(3) Reductions in other services, including other special services;

(4) Increases in fares;

(5) Resources available to implement complementary paratransit service over the period covered by the plan;

(6) Percentage of budget needed to implement the plan, both as a percentage of operating budget and a percentage of entire budget;

(7) The current level of accessible service, both fixed route and paratransit;

(8) Cooperation/coordination among area transportation providers;

(9) Evidence of increased efficiencies, that have been or could be effectuated, that would benefit the level and quality of available resources for complementary paratransit service; and

(10) Unique circumstances in the submitting entity's area that affect the ability of the entity to provide paratransit, that militate against the need to provide paratransit, or in some other respect create a circumstance considered exceptional by the submitting entity.

(b)(1) Costs attributable to complementary paratransit shall be limited to costs of providing service specifically required by this part to ADA paratransit eligible individuals, by entities responsible under this part for providing such service.

(2) If the entity determines that it is impracticable to distinguish between trips mandated by the ADA and other trips on a trip-by-trip basis, the entity shall attribute to ADA complementary paratransit requirements a percentage of its overall paratransit costs. This percentage shall be determined by a statistically valid methodology that determines the percentage of trips that are required by this part. The entity shall submit information concerning its methodology and the data on which its percentage is based with its request for a waiver. Only costs attributable to ADA-mandated trips may be considered with respect to a request for an undue financial burden waiver.

(3) Funds to which the entity would be legally entitled, but which, as a matter of state or local funding arrangements, are provided to another entity and used by that entity to provide paratransit service which is part of a coordinated system of paratransit meeting the requirements of this part, may be

counted in determining the burden associated with the waiver request.

§§ 37.157-37.159 [Reserved]

Subpart G—Provision of Service

§ 37.161 Maintenance of accessible features: General.

(a) Public and private entities providing transportation services shall maintain in operative condition those features of facilities and vehicles that are required to make the vehicles and facilities readily accessible to and usable by individuals with disabilities. These features include, but are not limited to, lifts and other means of access to vehicles, securement devices, elevators, signage and systems to facilitate communications with persons with impaired vision or hearing.

(b) Accessibility features shall be repaired promptly if they are damaged or out of order. When an accessibility feature is out of order, the entity shall take reasonable steps to accommodate individuals with disabilities who would otherwise use the feature.

(c) This section does not prohibit isolated or temporary interruptions in service or access due to maintenance or repairs.

§ 37.163 Keeping vehicle lifts in operative condition: Public entities.

(a) This section applies only to public entities with respect to lifts in non-rail vehicles.

(b) The entity shall establish a system of regular and frequent maintenance checks of lifts sufficient to determine if they are operative.

(c) The entity shall ensure that vehicle operators report to the entity, by the most immediate means available, any failure of a lift to operate in service.

(d) Except as provided in paragraph (e) of this section, when a lift is discovered to be inoperative, the entity shall take the vehicle out of service before the beginning of the vehicle's next service day and ensure that the lift is repaired before the vehicle returns to service.

(e) If there is no spare vehicle available to take the place of a vehicle with an inoperable lift, such that taking the vehicle out of service will reduce the transportation service the entity is able to provide, the public entity may keep the vehicle in service with an inoperable lift for no more than five days (if the entity serves an area of 50,000 or less population) or three days (if the entity serves an area of over 50,000 population) from the day on which the lift is discovered to be inoperative.

(f) In any case in which a vehicle is operating on a fixed route with an

inoperative lift, and the headway to the next accessible vehicle on the route exceeds 30 minutes, the entity shall promptly provide alternative transportation to individuals with disabilities who are unable to use the vehicle because its lift does not work.

§ 37.165 Lift and securement use.

(a) This section applies to public and private entities.

(b) All common wheelchairs and their users shall be transported in the entity's vehicles or other conveyances. The entity is not required to permit wheelchairs to ride in places other than designated securement locations in the vehicle, where such locations exist.

(c)(1) For vehicles complying with part 38 of this title, the entity shall use the securement system to secure wheelchairs as provided in that Part.

(2) For other vehicles transporting individuals who use wheelchairs, the entity shall provide and use a securement system to ensure that the wheelchair remains within the securement area.

(3) The entity may require that an individual permit his or her wheelchair to be secured.

(d) The entity may not deny transportation to a wheelchair or its user on the ground that the device cannot be secured or restrained satisfactorily by the vehicle's securement system.

(e) The entity may recommend to a user of a wheelchair that the individual transfer to a vehicle seat. The entity may not require the individual to transfer.

(f) Where necessary or upon request, the entity's personnel shall assist individuals with disabilities with the use of securement systems, ramps and lifts. If it is necessary for the personnel to leave their seats to provide this assistance, they shall do so.

(g) The entity shall permit individuals with disabilities who do not use wheelchairs, including standees, to use a vehicle's lift or ramp to enter the vehicle.

§ 37.167 Other service requirements.

(a) This section applies to public and private entities.

(b) On fixed route systems, the entity shall announce stops as follows:

(1) The entity shall announce at least at transfer points with other fixed routes, other major intersections and destination points, and intervals along a route sufficient to permit individuals with visual impairments or other disabilities to be oriented to their location.

(2) The entity shall announce any stop on request of an individual with a disability.

(c) Where vehicles or other conveyances for more than one route serve the same stop, the entity shall provide a means by which an individual with a visual impairment or other disability can identify the proper vehicle to enter or be identified to the vehicle operator as a person seeking a ride on a particular route.

(d) The entity shall permit service animals to accompany individuals with disabilities in vehicles and facilities.

(e) The entity shall ensure that vehicle operators and other personnel make use of accessibility-related equipment or features required by part 38 of this title.

(f) The entity shall make available to individuals with disabilities adequate information concerning transportation services. This obligation includes making adequate communications capacity available, through accessible formats and technology, to enable users to obtain information and schedule service.

(g) The entity shall not refuse to permit a passenger who uses a lift to disembark from a vehicle at any designated stop, unless the lift cannot be deployed, the lift will be damaged if it is deployed, or temporary conditions at the stop, not under the control of the entity, preclude the safe use of the stop by all passengers.

(h) The entity shall not prohibit an individual with a disability from traveling with a respirator or portable oxygen supply, consistent with applicable Department of Transportation rules on the transportation of hazardous materials (49 CFR subtitle B, chapter 1, subchapter C).

(i) The entity shall ensure that adequate time is provided to allow individuals with disabilities to complete boarding or disembarking from the vehicle.

§ 37.169 Interim requirements for over-the-road bus service operated by private entities.

(a) Private entities operating over-the-road buses, in addition to compliance with other applicable provisions of this part, shall provide accessible service as provided in this section.

(b) The private entity shall provide assistance, as needed, to individuals with disabilities in boarding and disembarking, including moving to and from the bus seat for the purpose of boarding and disembarking. The private entity shall ensure that personnel are

trained to provide this assistance safely and appropriately.

(c) To the extent that they can be accommodated in the areas of the passenger compartment provided for passengers' personal effects, wheelchairs or other mobility aids and assistive devices used by individuals with disabilities, or components of such devices, shall be permitted in the passenger compartment. When the bus is at rest at a stop, the driver or other personnel shall assist individuals with disabilities with the stowage and retrieval of mobility aids, assistive devices, or other items that can be accommodated in the passenger compartment of the bus.

(d) Wheelchairs and other mobility aids or assistive devices that cannot be accommodated in the passenger compartment (including electric wheelchairs) shall be accommodated in the baggage compartment of the bus,

unless the size of the baggage compartment prevents such accommodation.

(e) At any given stop, individuals with disabilities shall have the opportunity to have their wheelchairs or other mobility aids or assistive devices stowed in the baggage compartment before other baggage or cargo is loaded, but baggage or cargo already on the bus does not have to be off-loaded in order to make room for such devices.

(f) The entity may require up to 48 hours' advance notice only for providing boarding assistance. If the individual does not provide such notice, the entity shall nonetheless provide the service if it can do so by making a reasonable effort, without delaying the bus service.

§ 37.171 Equivalency requirement for demand responsive service operated by private entities not primarily engaged in the business of transporting people.

A private entity not primarily engaged in the business of transporting people

which operates a demand responsive system shall ensure that its system, when viewed in its entirety, provides equivalent service to individuals with disabilities, including individuals who use wheelchairs, as it does to individuals without disabilities. The standards of § 37.105 shall be used to determine if the entity is providing equivalent service.

§ 37.173 Training requirements.

Each public or private entity which operates a fixed route or demand responsive system shall ensure that personnel are trained to proficiency, as appropriate to their duties, so that they operate vehicles and equipment safely and properly assist and treat individuals with disabilities who use the service in a respectful and courteous way, with appropriate attention to the difference among individuals with disabilities.

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**PART 38—AMERICANS WITH DISABILITIES ACT (ADA)
ACCESSIBILITY SPECIFICATIONS FOR
TRANSPORTATION VEHICLES**

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Authority: Americans With Disabilities Act of 1990, Public Law. 101-336 (42 U.S.C. 12204); 49 U.S.C. 322.

Subpart A—General**§ 38.1 Purpose.**

This part provides minimum guidelines and requirements for accessibility standards in part 37 of this title for transportation vehicles required to be accessible by the Americans With Disabilities Act (ADA) of 1990 (42 U.S.C. 1201 et seq.).

§ 38.2 Equivalent facilitation.

Departures from particular technical and scoping requirements of these guidelines by use of other designs and technologies are permitted where the alternative designs and technologies used will provide substantially equivalent or greater access to and usability of the vehicle. Departures are to be considered on a case-by-case basis under procedures set forth in § 37.7 of this title.

§ 38.3 Definitions.

See § 37.3 of this title.

§ 38.4 Miscellaneous instructions.**(a) Dimensional conventions.**

Dimensions that are not noted as minimum or maximum are absolute.

(b) Dimensional tolerances. All dimensions are subject to conventional engineering tolerances for material properties and field conditions, including normal anticipated wear not exceeding accepted industry-wide standards and practices.

(c) Notes. The text of these guidelines does not contain notes or footnotes. Additional information, explanations, and advisory materials are located in the Appendix.

(d) General terminology. (1) *Comply with* means meet one or more specification of these guidelines.

(2) *If or if * * * then* denotes a specification that applies only when the conditions described are present.

(3) *May* denotes an option or alternative.

(4) *Shall* denotes a mandatory specification or requirement.

(5) *Should* denotes an advisory specification or recommendation.

Subpart B—Buses, Vans and Systems**§ 38.21 General.**

(a) New, used or remanufactured buses and vans (except over-the-road buses covered by subpart G of this part), to be considered accessible by regulations in part 37 of this title shall comply with the applicable provisions of this subpart.

(b) If portions of the vehicle are modified in a way that affects or could affect accessibility, each such portion shall comply, to the extent practicable, with the applicable provisions of this subpart. This provision does not require that inaccessible buses be retrofitted with lifts, ramps or other boarding devices.

§ 38.23 Mobility aid accessibility.

(a) *General.* All vehicles covered by this subpart shall provide a level-change mechanism or boarding device (e.g., lift or ramp) complying with paragraph (b)

or (c) of this section and sufficient clearances to permit a wheelchair or other mobility aid user to reach a securement location. At least two securement locations and devices, complying with paragraph (d) of this section, shall be provided on vehicles in excess of 22 feet in length; at least one securement location and device, complying with paragraph (d) of this section, shall be provided on vehicles 22 feet in length or less.

(b) *Vehicle lift*—(1) *Design load.* The design load of the lift shall be at least 600 pounds. Working parts, such as cables, pulleys, and shafts, which can be expected to wear, and upon which the lift depends for support of the load, shall have a safety factor of at least six, based on the ultimate strength of the material. Nonworking parts, such as platform, frame, and attachment hardware which would not be expected to wear, shall have a safety factor of at least three, based on the ultimate strength of the material.

(2) *Controls*—(i) *Requirements.* The controls shall be interlocked with the vehicle brakes, transmission, or door, or shall provide other appropriate mechanisms or systems, to ensure that the vehicle cannot be moved when the lift is not stowed and so the lift cannot be deployed unless the interlocks or systems are engaged. The lift shall deploy to all levels (i.e., ground, curb, and intermediate positions) normally encountered in the operating environment. Where provided, each control for deploying, lowering, raising, and stowing the lift and lowering the roll-off barrier shall be of a momentary contact type requiring continuous manual pressure by the operator and shall not allow improper lift sequencing when the lift platform is occupied. The controls shall allow reversal of the lift operation sequence, such as raising or lowering a platform that is part way down, without allowing an occupied platform to fold or retract into the stowed position.

(ii) *Exception.* Where the lift is designed to deploy with its long dimension parallel to the vehicle axis and which pivots into or out of the vehicle while occupied (i.e., "rotary lift"), the requirements of this paragraph prohibiting the lift from being stowed while occupied shall not apply if the stowed position is within the passenger compartment and the lift is intended to be stowed while occupied.

(3) *Emergency operation.* The lift shall incorporate an emergency method of deploying, lowering to ground level with a lift occupant, and raising and stowing the empty lift if the power to the lift

fails. No emergency method, manual or otherwise, shall be capable of being operated in a manner that could be hazardous to the lift occupant or to the operator when operated according to manufacturer's instructions, and shall not permit the platform to be stowed or folded when occupied, unless the lift is a rotary lift and is intended to be stowed while occupied.

(4) *Power or equipment failure.*

Platforms stowed in a vertical position, and deployed platforms when occupied, shall have provisions to prevent their deploying, falling, or folding any faster than 12 inches/second or their dropping of an occupant in the event of a single failure of any load carrying component.

(5) *Platform barriers.* The lift platform shall be equipped with barriers to prevent any of the wheels of a wheelchair or mobility aid from rolling off the platform during its operation. A movable barrier or inherent design feature shall prevent a wheelchair or mobility aid from rolling off the edge closest to the vehicle until the platform is in its fully raised position. Each side of the lift platform which extends beyond the vehicle in its raised position shall have a barrier a minimum 1½ inches high. Such barriers shall not interfere with maneuvering into or out of the aisle. The loading-edge barrier (outer barrier) which functions as a loading ramp when the lift is at ground level, shall be sufficient when raised or closed, or a supplementary system shall be provided, to prevent a power wheelchair or mobility aid from riding over or defeating it. The outer barrier of the lift shall automatically raise or close, or a supplementary system shall automatically engage, and remain raised, closed, or engaged at all times that the platform is more than 3 inches above the roadway or sidewalk and the platform is occupied. Alternatively, a barrier or system may be raised, lowered, opened, closed, engaged, or disengaged by the lift operator, provided an interlock or inherent design feature prevents the lift from rising unless the barrier is raised or closed or the supplementary system is engaged.

(6) *Platform surface.* The platform surface shall be free of any protrusions over ¼ inch high and shall be slip resistant. The platform shall have a minimum clear width of 28½ inches at the platform, a minimum clear width of 30 inches measured from 2 inches above the platform surface to 30 inches above the platform, and a minimum clear length of 48 inches measured from 2 inches above the surface of the platform to 30 inches above the surface of the platform. (See Fig. 1)

(7) *Platform gaps.* Any openings between the platform surface and the raised barriers shall not exceed ⅝ inch in width. When the platform is at vehicle floor height with the inner barrier (if applicable) down or retracted, gaps between the forward lift platform edge and the vehicle floor shall not exceed ½ inch horizontally and ⅝ inch vertically. Platforms on semi-automatic lifts may have a hand hold not exceeding 1½ inches by 4½ inches located between the edge barriers.

(8) *Platform entrance ramp.* The entrance ramp, or loading-edge barrier used as a ramp, shall not exceed a slope of 1:8, measured on level ground, for a maximum rise of 3 inches, and the transition from roadway or sidewalk to ramp may be vertical without edge treatment up to ¼ inch. Thresholds between ¼ inch and ½ inch high shall be beveled with a slope no greater than 1:2.

(9) *Platform deflection.* The lift platform (not including the entrance ramp) shall not deflect more than 3 degrees (exclusive of vehicle roll or pitch) in any direction between its unloaded position and its position when loaded with 600 pounds applied through a 28 inch by 28 inch test pallet at the centroid of the platform.

(10) *Platform movement.* No part of the platform shall move at a rate exceeding 6 inches/second during lowering and lifting an occupant, and shall not exceed 12 inches/second during deploying or stowing. This requirement does not apply to the deployment or stowage cycles of lifts that are manually deployed or stowed. The maximum platform horizontal and vertical acceleration when occupied shall be 0.3g.

(11) *Boarding direction.* The lift shall permit both inboard and outboard facing of wheelchair and mobility aid users.

(12) *Use by standees.* Lifts shall accommodate persons using walkers, crutches, canes or braces or who otherwise have difficulty using steps. The platform may be marked to indicate a preferred standing position.

(13) *Handrails.* Platforms on lifts shall be equipped with handrails on two sides, which move in tandem with the lift, and which shall be graspable and provide support to standees throughout the entire lift operation. Handrails shall have a usable component at least 8 inches long with the lowest portion a minimum 30 inches above the platform and the highest portion a maximum 38 inches above the platform. The handrails shall be capable of withstanding a force of 100 pounds concentrated at any point on the

handrail without permanent deformation of the rail or its supporting structure. The handrail shall have a cross-sectional diameter between 1¼ inches and 1½ inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than ⅛ inch. Handrails shall be placed to provide a minimum 1½ inches knuckle clearance from the nearest adjacent surface. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the vehicle.

(c) *Vehicle ramp—(1) Design load.* Ramps 30 inches or longer shall support a load of 600 pounds, placed at the centroid of the ramp distributed over an area of 26 inches by 26 inches, with a safety factor of at least 3 based on the ultimate strength of the material. Ramps shorter than 30 inches shall support a load of 300 pounds.

(2) *Ramp surface.* The ramp surface shall be continuous and slip resistant; shall not have protrusions from the surface greater than ¼ inch high; shall have a clear width of 30 inches; and shall accommodate both four-wheel and three-wheel mobility aids.

(3) *Ramp threshold.* The transition from roadway or sidewalk and the transition from vehicle floor to the ramp may be vertical without edge treatment up to ¼ inch. Changes in level between ¼ inch and ½ inch shall be beveled with a slope no greater than 1:2.

(4) *Ramp barriers.* Each side of the ramp shall have barriers at least 2 inches high to prevent mobility aid wheels from slipping off.

(5) *Slope.* Ramps shall have the least slope practicable and shall not exceed 1:4 when deployed to ground level. If the height of the vehicle floor from which the ramp is deployed is 3 inches or less above a 6-inch curb, a maximum slope of 1:4 is permitted; if the height of the vehicle floor from which the ramp is deployed is 6 inches or less, but greater than 3 inches, above a 6-inch curb, a maximum slope of 1:6 is permitted; if the height of the vehicle floor from which the ramp is deployed is 9 inches or less, but greater than 6 inches, above a 6-inch curb, a maximum slope of 1:8 is permitted; if the height of the vehicle floor from which the ramp is deployed is greater than 9 inches above a 6-inch curb, a slope of 1:12 shall be achieved. Folding or telescoping ramps are permitted provided they meet all structural requirements of this section.

(6) *Attachment.* When in use for boarding or alighting, the ramp shall be firmly attached to the vehicle so that it is not subject to displacement when loading or unloading a heavy power

mobility aid and that no gap between vehicle and ramp exceeds $\frac{5}{8}$ inch.

(7) *Stowage.* A compartment, securement system, or other appropriate method shall be provided to ensure that stowed ramps, including portable ramps stowed in the passenger area, do not impinge on a passenger's wheelchair or mobility aid or pose any hazard to passengers in the event of a sudden stop or maneuver.

(8) *Handrails.* If provided, handrails shall allow persons with disabilities to grasp them from outside the vehicle while starting to board, and to continue to use them throughout the boarding process, and shall have the top between 30 inches and 38 inches above the ramp surface. The handrails shall be capable of withstanding a force of 100 pounds concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure. The handrail shall have a cross-sectional diameter between $1\frac{1}{4}$ inches and $1\frac{1}{2}$ inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than $\frac{1}{8}$ inch. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the vehicle.

(d) *Securement devices—* (1) *Design load.* Securement systems on vehicles with GVWRs of 30,000 pounds or above, and their attachments to such vehicles, shall restrain a force in the forward longitudinal direction of up to 2,000 pounds per securement leg or clamping mechanism and a minimum of 4,000 pounds for each mobility aid. Securement systems on vehicles with GVWRs of up to 30,000 pounds, and their attachments to such vehicles, shall restrain a force in the forward longitudinal direction of up to 2,500 pounds per securement leg or clamping mechanism and a minimum of 5,000 pounds for each mobility aid.

(2) *Location and size.* The securement system shall be placed as near to the accessible entrance as practicable and shall have a clear floor area of 30 inches by 48 inches. Such space shall adjoin, and may overlap, an access path. Not more than 6 inches of the required clear floor space may be accommodated for footrests under another seat provided there is a minimum of 9 inches from the floor to the lowest part of the seat overhanging the space. Securement areas may have fold-down seats to accommodate other passengers when a wheelchair or mobility aid is not occupying the area, provided the seats, when folded up, do not obstruct the clear floor space required. (See Fig. 2)

(3) *Mobility aids accommodated.* The securement system shall secure common

wheelchairs and mobility aids and shall either be automatic or easily attached by a person familiar with the system and mobility aid and having average dexterity.

(4) *Orientation.* In vehicles in excess of 22 feet in length, at least one securement device or system required by paragraph (a) of this section shall secure the wheelchair or mobility aid facing toward the front of the vehicle. Additional securement devices or systems shall secure the wheelchair or mobility aid facing forward, or rearward with a padded barrier, extending from a height of 38 inches from the vehicle floor to a height of 56 inches from the vehicle floor with a width of 18 inches, laterally centered immediately in back of the seated individual. In vehicles 22 feet in length or less, the required securement device may secure the wheelchair or mobility aid either facing toward the front of the vehicle or facing rearward, with a padded barrier as described. Additional securement locations shall be either forward or rearward facing with a padded barrier. Such barriers need not be solid provided equivalent protection is afforded.

(5) *Movement.* When the wheelchair or mobility aid is secured in accordance with manufacturer's instructions, the securement system shall limit the movement of an occupied wheelchair or mobility aid to no more than 2 inches in any direction under normal vehicle operating conditions.

(6) *Stowage.* When not being used for securement, or when the securement area can be used by standees, the securement system shall not interfere with passenger movement, shall not present any hazardous condition, shall be reasonably protected from vandalism, and shall be readily accessed when needed for use.

(7) *Seat belt and shoulder harness.* For each wheelchair or mobility aid securement device provided, a passenger seat belt and shoulder harness, complying with all applicable provisions of part 571 of this title, shall also be provided for use by wheelchair or mobility aid users. Such seat belts and shoulder harnesses shall not be used in lieu of a device which secures the wheelchair or mobility aid itself.

§ 38.25 Doors, steps and thresholds.

(a) *Slip resistance.* All aisles, steps, floor areas where people walk and floors in securement locations shall have slip-resistant surfaces.

(b) *Contrast.* All step edges, thresholds and the boarding edge of ramps or lift platforms shall have a band of color(s) running the full width of the step or edge which contrasts from the

step tread and riser, or lift or ramp surface, either light-on-dark or dark-on-light.

(c) *Door height.* For vehicles in excess of 22 feet in length, the overhead clearance between the top of the door opening and the raised lift platform, or highest point of a ramp, shall be a minimum of 68 inches. For vehicles of 22 feet in length or less, the overhead clearance between the top of the door opening and the raised lift platform, or highest point of a ramp, shall be a minimum of 56 inches.

§ 38.27 Priority seating signs.

(a) Each vehicle shall contain sign(s) which indicate that seats in the front of the vehicle are priority seats for persons with disabilities, and that other passengers should make such seats available to those who wish to use them. At least one set of forward-facing seats shall be so designated.

(b) Each securement location shall have a sign designating it as such.

(c) Characters on signs required by paragraphs (a) and (b) of this section shall have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10, with a minimum character height (using an upper case "X") of $\frac{5}{8}$ inch, with "wide" spacing (generally, the space between letters shall be $\frac{1}{4}$ the height of upper case letters), and shall contrast with the background either light-on-dark or dark-on-light.

§ 38.29 Interior circulation, handrails and stanchions.

(a) Interior handrails and stanchions shall permit sufficient turning and maneuvering space for wheelchairs and other mobility aids to reach a securement location from the lift or ramp.

(b) Handrails and stanchions shall be provided in the entrance to the vehicle in a configuration which allows persons with disabilities to grasp such assists from outside the vehicle while starting to board, and to continue using such assists throughout the boarding and fare collection process. Handrails shall have a cross-sectional diameter between $1\frac{1}{4}$ inches and $1\frac{1}{2}$ inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than $\frac{1}{8}$ inch. Handrails shall be placed to provide a minimum $1\frac{1}{2}$ inches knuckle clearance from the nearest adjacent surface. Where on-board fare collection devices are used on vehicles in excess of 22 feet in length, a horizontal passenger assist shall be located across the front of the vehicle and shall prevent passengers from

sustaining injuries on the fare collection device or windshield in the event of a sudden deceleration. Without restricting the vestibule space, the assist shall provide support for a boarding passenger from the front door through the boarding procedure. Passengers shall be able to lean against the assist for security while paying fares.

(c) For vehicles in excess of 22 feet in length, overhead handrail(s) shall be provided which shall be continuous except for a gap at the rear doorway.

(d) Handrails and stanchions shall be sufficient to permit safe boarding, on-board circulation, seating and standing assistance, and alighting by persons with disabilities.

(e) For vehicles in excess of 22 feet in length with front-door lifts or ramps, vertical stanchions immediately behind the driver shall either terminate at the lower edge of the aisle-facing seats, if applicable, or be "dog-legged" so that the floor attachment does not impede or interfere with wheelchair footrests. If the driver seat platform must be passed by a wheelchair or mobility aid user entering the vehicle, the platform, to the maximum extent practicable, shall not extend into the aisle or vestibule beyond the wheel housing.

(f) For vehicles in excess of 22 feet in length, the minimum interior height along the path from the lift to the securement location shall be 68 inches. For vehicles of 22 feet in length or less, the minimum interior height from lift to securement location shall be 58 inches.

§ 38.31 Lighting.

(a) Any stepwell or doorway immediately adjacent to the driver shall have, when the door is open, at least 2 foot-candles of illumination measured on the step tread or lift platform.

(b) Other stepwells and doorways, including doorways in which lifts or ramps are installed, shall have, at all times, at least 2 foot-candles of illumination measured on the step tread, or lift or ramp, when deployed at the vehicle floor level.

(c) The vehicle doorways, including doorways in which lifts or ramps are installed, shall have outside light(s) which, when the door is open, provide at least 1 foot-candle of illumination on the street surface for a distance of 3 feet perpendicular to all points on the bottom step tread outer edge. Such light(s) shall be located below window level and shielded to protect the eyes of entering and existing passengers.

§ 38.33 Fare box.

Where provided, the farebox shall be located as far forward as practicable and shall not obstruct traffic in the

vestibule, especially wheelchairs or mobility aids.

§ 38.35 Public information system.

(a) Vehicles in excess of 22 feet in length, used in multiple-stop, fixed-route service, shall be equipped with a public address system permitting the driver, or recorded or digitized human speech messages, to announce stops and provide other passenger information within the vehicle.

(b) [Reserved]

§ 38.37 Stop request.

(a) Where passengers may board or alight at multiple stops at their option, vehicles in excess of 22 feet in length shall provide controls adjacent to the securement location for requesting stops and which alerts the driver that a mobility aid user wishes to disembark. Such a system shall provide auditory and visual indications that the request has been made.

(b) Controls required by paragraph (a) of this section shall be mounted no higher than 48 inches and no lower than 15 inches above the floor, shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N).

§ 38.39 Destination and route signs.

(a) Where destination or route information is displayed on the exterior of a vehicle, each vehicle shall have illuminated signs on the front and boarding side of the vehicle.

(b) Characters on signs required by paragraph (a) of this section shall have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10, with a minimum character height (using an upper case "X") of 1 inch for signs on the boarding side and a minimum character height of 2 inches for front "headsigs", with "wide" spacing (generally, the space between letters shall be 1/18 the height of upper case letters), and shall contrast with the background, either dark-on-light or light-on-dark.

Subpart C—Rapid Rail Vehicles and Systems

§ 38.51 General.

(a) New, used and remanufactured rapid rail vehicles, to be considered accessible by regulations in part 37 of this title, shall comply with this subpart.

(b) If portions of the vehicle are modified in a way that affects or could affect accessibility, each such portion shall comply, to the extent practicable, with the applicable provisions of this subpart. This provision does not require

that inaccessible vehicles be retrofitted with lifts, ramps or other boarding devices.

(c) Existing vehicles which are retrofitted to comply with the "one-car-per-train rule" of § 37.93 of this title shall comply with §§ 38.55, 38.57(b), 38.59 of this part and shall have, in new and key stations, at least one door complying with §§ 38.53 (a)(1), (b) and (d) of this part. Removal of seats is not required. Vehicles previously designed and manufactured in accordance with the accessibility requirements of part 609 of this title or the Secretary of Transportation regulations implementing section 504 of the Rehabilitation Act of 1973 that were in effect before October 7, 1991, and which can be entered and used from stations in which they are to be operated, may be used to satisfy the requirements of § 37.93 of this title.

§ 38.53 Doorways.

(a) *Clear width.* (1) Passenger doorways on vehicle sides shall have clear openings at least 32 inches wide when open.

(2) If doorways connecting adjoining cars in a multi-car train are provided, and if such doorway is connected by an aisle with a minimum clear width of 30 inches to one or more spaces where wheelchair or mobility aid users can be accommodated, then such doorway shall have a minimum clear opening of 30 inches to permit wheelchair and mobility aid users to be evacuated to an adjoining vehicle in an emergency.

(b) *Signage.* The International Symbol of Accessibility shall be displayed on the exterior of accessible vehicles operating on an accessible rapid rail system unless all vehicles are accessible and are not marked by the access symbol. (See Fig. 8.)

(c) *Signals.* Auditory and visual warning signals shall be provided to alert passengers of closing doors.

(d) *Coordination with boarding platform.* (1) *Requirements.* Where new vehicles will operate in new stations, the design of vehicles shall be coordinated with the boarding platform design such that the horizontal gap between each vehicle door at rest and the platform shall be no greater than 3 inches and the height of the vehicle floor shall be within plus or minus 5/8 inch of the platform height under all normal passenger load conditions. Vertical alignment may be accomplished by vehicle air suspension or other suitable means of meeting the requirement.

(2) *Exception.* New vehicles operating in existing stations may have a floor height within plus or minus 1 1/2 inches of

the platform height. At key stations, the horizontal gap between at least one door of each such vehicle and the platform shall be no greater than 3 inches.

(3) *Exception.* Retrofitted vehicles shall be coordinated with the platform in new and key stations such that the horizontal gap shall be no greater than 4 inches and the height of the vehicle floor, under 50% passenger load, shall be within plus or minus 2 inches of the platform height.

§ 38.55 Priority seating signs.

(a) Each vehicle shall contain sign(s) which indicate that certain seats are priority seats for persons with disabilities, and that other passengers should make such seats available to those who wish to use them.

(b) Characters on signs required by paragraph (a) of this section shall have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10, with a minimum character height (using an upper case "X") of $\frac{5}{8}$ inch, with "wide" spacing (generally, the space between letters shall be $\frac{1}{4}$ the height of upper case letters), and shall contrast with the background, either light-on-dark or dark-on-light.

§ 38.57 Interior circulation, handrails and stanchions.

(a) Handrails and stanchions shall be provided to assist safe boarding, on-board circulation, seating and standing assistance, and alighting by persons with disabilities.

(b) Handrails, stanchions, and seats shall allow a route at least 32 inches wide so that at least two wheelchair or mobility aid users can enter the vehicle and position the wheelchairs or mobility aids in areas, each having a minimum clear space of 48 inches by 30 inches, which do not unduly restrict movement of other passengers. Space to accommodate wheelchairs and mobility aids may be provided within the normal area used by standees and designation of specific spaces is not required. Particular attention shall be given to ensuring maximum maneuverability immediately inside doors. Ample vertical stanchions from ceiling to seat-back rails shall be provided. Vertical stanchions from ceiling to floor shall not interfere with wheelchair or mobility aid user circulation and shall be kept to a minimum in the vicinity of doors.

(c) The diameter or width of the gripping surface of handrails and stanchions shall be $1\frac{1}{4}$ inches to $1\frac{1}{2}$ inches or provide an equivalent gripping surface and shall provide a minimum

$1\frac{1}{2}$ inches knuckle clearance from the nearest adjacent surface.

§ 38.59 Floor surfaces.

Floor surfaces on aisles, places for standees, and areas where wheelchair and mobility aid users are to be accommodated shall be slip-resistant.

§ 38.61 Public information system.

(a)(1) *Requirements.* Each vehicle shall be equipped with a public address system permitting transportation system personnel, or recorded or digitized human speech messages, to announce stations and provide other passenger information. Alternative systems or devices which provide equivalent access are also permitted. Each vehicle operating in stations having more than one line or route shall have an external public address system to permit transportation system personnel, or recorded or digitized human speech messages, to announce train, route, or line identification information.

(2) *Exception.* Where station announcement systems provide information on arriving trains, an external train speaker is not required.

(b) [Reserved].

§ 38.63 Between-car barriers.

(a) *Requirement.* Suitable devices or systems shall be provided to prevent, deter or warn individuals from inadvertently stepping off the platform between cars. Acceptable solutions include, but are not limited to, pantograph gates, chains, motion detectors or similar devices.

(b) *Exception.* Between-car barriers are not required where platform screens are provided which close off the platform edge and open only when trains are correctly aligned with the doors.

Subpart D—Light Rail Vehicles and Systems

§ 38.71 General.

(a) New, used and remanufactured light rail vehicles, to be considered accessible by regulations in part 37 of this title shall comply with this subpart.

(b)(1) Vehicles intended to be operated solely in light rail systems confined entirely to a dedicated right-of-way, and for which all stations or stops are designed and constructed for revenue service after the effective date of standards for design and construction in § 37.21 and § 37.23 of this title shall provide level boarding and shall comply with § 38.73(d)(1) and § 38.85 of this part.

(2) Vehicles designed for, and operated on, pedestrian malls, city streets, or other areas where level

boarding is not practicable shall provide wayside or car-borne lifts, mini-high platforms, or other means of access in compliance with § 38.83 (b) or (c) of this part.

(c) If portions of the vehicle are modified in a way that affects or could affect accessibility, each such portion shall comply, to the extent practicable, with the applicable provisions of this subpart. This provision does not require that inaccessible vehicles be retrofitted with lifts, ramps or other boarding devices.

(d) Existing vehicles retrofitted to comply with the "one-car-per-train rule" at § 37.93 of this title shall comply with § 38.75, § 38.77(c), § 38.79(a) and § 38.83(a) of this part and shall have, in new and key stations, at least one door which complies with §§ 38.73 (a)(1), (b) and (d) of this part. Vehicles previously designed and manufactured in accordance with the accessibility requirements of part 609 of this title or the Secretary of Transportation regulations implementing section 504 of the Rehabilitation Act of 1973 that were in effect before October 7, 1991, and which can be entered and used from stations in which they are to be operated, may be used to satisfy the requirements of § 37.93 of this title.

§ 38.73 Doorways.

(a) *Clear width*—(1) All passenger doorways on vehicle sides shall have minimum clear openings of 32 inches when open.

(2) If doorways connecting adjoining cars in a multi-car train are provided, and if such doorway is connected by an aisle with a minimum clear width of 30 inches to one or more spaces where wheelchair or mobility aid users can be accommodated, then such doorway shall have a minimum clear opening of 30 inches to permit wheelchair and mobility aid users to be evacuated to an adjoining vehicle in an emergency.

(b) *Signage.* The International Symbol of Accessibility shall be displayed on the exterior of each vehicle operating on an accessible light rail system unless all vehicles are accessible and are not marked by the access symbol (see fig. 6).

(c) *Signals.* Auditory and visual warning signals shall be provided to alert passengers of closing doors.

(d) *Coordination with boarding platform*—(1) *Requirements.* The design of level-entry vehicles shall be coordinated with the boarding platform or mini-high platform design so that the horizontal gap between a vehicle at rest and the platform shall be no greater than 3 inches and the height of the vehicle floor shall be within plus or

minus $\frac{3}{8}$ inch of the platform height. Vertical alignment may be accomplished by vehicle air suspension, automatic ramps or lifts, or any combination.

(2) *Exception.* New vehicles operating in existing stations may have a floor height within plus or minus $1\frac{1}{2}$ inches of the platform height. At key stations, the horizontal gap between at least one door of each such vehicle and the platform shall be no greater than 3 inches.

(3) *Exception.* Retrofitted vehicles shall be coordinated with the platform in new and key stations such that the horizontal gap shall be no greater than 4 inches and the height of the vehicle floor, under 50% passenger load, shall be within plus or minus 2 inches of the platform height.

(4) *Exception.* Where it is not operationally or structurally practicable to meet the horizontal or vertical requirements of paragraphs (d) (1), (2) or (3) of this section, platform or vehicle devices complying with § 38.83(b) or platform or vehicle mounted ramps or bridge plates complying with § 38.83(c) shall be provided.

§ 38.75 Priority seating signs.

(a) Each vehicle shall contain sign(s) which indicate that certain seats are priority seats for persons with disabilities, and that other passengers should make such seats available to those who wish to use them.

(b) Where designated wheelchair or mobility aid seating locations are provided, signs shall indicate the location and advise other passengers of the need to permit wheelchair and mobility aid users to occupy them.

(c) Characters on signs required by paragraphs (a) or (b) of this section shall have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10, with a minimum character height (using an upper case "X") of $\frac{3}{8}$ inch, with "wide" spacing (generally, the space between letters shall be $\frac{1}{16}$ the height of upper case letters), and shall contrast with the background, either light-on-dark or dark-on-light.

§ 38.77 Interior circulation, handrails and stanchions.

(a) Handrails and stanchions shall be sufficient to permit safe boarding, on-board circulation, seating and standing assistance, and alighting by persons with disabilities.

(b) At entrances equipped with steps, handrails and stanchions shall be provided in the entrance to the vehicle in a configuration which allows passengers to grasp such assists from outside the vehicle while starting to

board, and to continue using such handrails or stanchions throughout the boarding process. Handrails shall have a cross-sectional diameter between $1\frac{1}{4}$ inches and $1\frac{1}{2}$ inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than $\frac{1}{8}$ inch. Handrails shall be placed to provide a minimum $1\frac{1}{2}$ inches knuckle clearance from the nearest adjacent surface. Where on-board fare collection devices are used, a horizontal passenger assist shall be located between boarding passengers and the fare collection device and shall prevent passengers from sustaining injuries on the fare collection device or windshield in the event of a sudden deceleration. Without restricting the vestibule space, the assist shall provide support for a boarding passenger from the door through the boarding procedure. Passengers shall be able to lean against the assist for security while paying fares.

(c) At all doors on level-entry vehicles, and at each entrance accessible by lift, ramp, bridge plate or other suitable means, handrails, stanchions, passenger seats, vehicle driver seat platforms, and fare boxes, if applicable, shall be located so as to allow a route at least 32 inches wide so that at least two wheelchair or mobility aid users can enter the vehicle and position the wheelchairs or mobility aids in areas, each having a minimum clear space of 48 inches by 30 inches, which do not unduly restrict movement of other passengers. Space to accommodate wheelchairs and mobility aids may be provided within the normal area used by standees and designation of specific spaces is not required. Particular attention shall be given to ensuring maximum maneuverability immediately inside doors. Ample vertical stanchions from ceiling to seat-back rails shall be provided. Vertical stanchions from ceiling to floor shall not interfere with wheelchair or mobility aid circulation and shall be kept to a minimum in the vicinity of accessible doors.

§ 38.79 Floors, steps and thresholds.

(a) Floor surfaces on aisles, step treads, places for standees, and areas where wheelchair and mobility aid users are to be accommodated shall be slip-resistant.

(b) All thresholds and step edges shall have a band of color(s) running the full width of the step or threshold which contrasts from the step tread and riser or adjacent floor, either light-on-dark or dark-on-light.

§ 38.81 Lighting.

(a) Any stepwell or doorway with a lift, ramp or bridge plate immediately adjacent to the driver shall have, when the door is open, at least 2 foot-candles of illumination measured on the step tread or lift platform.

(b) Other stepwells, and doorways with lifts, ramps or bridge plates, shall have, at all times, at least 2 foot-candles of illumination measured on the step tread or lift or ramp, when deployed at the vehicle floor level.

(c) The doorways of vehicles not operating at lighted station platforms shall have outside lights which provide at least 1 foot-candle of illumination on the station platform or street surface for a distance of 3 feet perpendicular to all points on the bottom step tread. Such lights shall be located below window level and shielded to protect the eyes of entering and exiting passengers.

§ 38.83 Mobility aid accessibility.

(a)(1) *General.* All new light rail vehicles, other than level entry vehicles, covered by this subpart shall provide a level-change mechanism or boarding device (e.g., lift, ramp or bridge plate) complying with either paragraph (b) or (c) of this section and sufficient clearances to permit at least two wheelchair or mobility aid users to reach areas, each with a minimum clear floor space of 48 inches by 30 inches, which do not unduly restrict passenger flow. Space to accommodate wheelchairs and mobility aids may be provided within the normal area used by standees and designation of specific spaces is not required.

(2) *Exception.* If lifts, ramps or bridge plates meeting the requirements of this section are provided on station platforms or other stops required to be accessible, or mini-high platforms complying with § 38.73(d) of this part are provided, the vehicle is not required to be equipped with a car-borne device. Where each new vehicle is compatible with a single platform-mounted access system or device, additional systems or devices are not required for each vehicle provided that the single device could be used to provide access to each new vehicle if passengers using wheelchairs or mobility aids could not be accommodated on a single vehicle.

(b) *Vehicle lift—(1) Design load.* The design load of the lift shall be at least 600 pounds. Working parts, such as cables, pulleys, and shafts, which can be expected to wear, and upon which the lift depends for support of the load, shall have a safety factor of at least six, based on the ultimate strength of the material. Nonworking parts, such as

platform, frame, and attachment hardware which would not be expected to wear, shall have a safety factor of at least three, based on the ultimate strength of the material.

(2) *Controls*—(i) *Requirements*. The controls shall be interlocked with the vehicle brakes, propulsion system, or door, or shall provide other appropriate mechanisms or systems, to ensure that the vehicle cannot be moved when the lift is not stowed and so the lift cannot be deployed unless the interlocks or systems are engaged. The lift shall deploy to all levels (i.e., ground, curb, and intermediate positions) normally encountered in the operating environment. Where provided, each control for deploying, lowering, raising, and stowing the lift and lowering the roll-off barrier shall be of a momentary contact type requiring continuous manual pressure by the operator and shall not allow improper lift sequencing when the lift platform is occupied. The controls shall allow reversal of the lift operation sequence, such as raising or lowering a platform that is part way down, without allowing an occupied platform to fold or retract into the stowed position.

(ii) *Exception*. Where physical or safety constraints prevent the deployment at some stops of a lift having its long dimension perpendicular to the vehicle axis, the transportation entity may specify a lift which is designed to deploy with its long dimension parallel to the vehicle axis and which pivots into or out of the vehicle while occupied (i.e., "rotary lift"). The requirements of paragraph (b)(2)(i) of this section prohibiting the lift from being stowed while occupied shall not apply to a lift design of this type if the stowed position is within the passenger compartment and the lift is intended to be stowed while occupied.

(iii) *Exception*. The brake or propulsion system interlocks requirement does not apply to a station platform mounted lift provided that a mechanical, electrical or other system operates to ensure that vehicles do not move when the lift is in use.

(3) *Emergency operation*. The lift shall incorporate an emergency method of deploying, lowering to ground level with a lift occupant, and raising and stowing the empty lift if the power to the lift fails. No emergency method, manual or otherwise, shall be capable of being operated in a manner that could be hazardous to the lift occupant or to the operator when operated according to manufacturer's instructions, and shall not permit the platform to be stowed or folded when occupied, unless the lift is a

rotary lift intended to be stowed while occupied.

(4) *Power or equipment failure*. Lift platforms stowed in a vertical position, and deployed platforms when occupied, shall have provisions to prevent their deploying, falling, or folding any faster than 12 inches/second or their dropping of an occupant in the event of a single failure of any load carrying component.

(5) *Platform barriers*. The lift platform shall be equipped with barriers to prevent any of the wheels of a wheelchair or mobility aid from rolling off the lift during its operation. A movable barrier or inherent design feature shall prevent a wheelchair or mobility aid from rolling off the edge closest to the vehicle until the lift is in its fully raised position. Each side of the lift platform which extends beyond the vehicle in its raised position shall have a barrier a minimum 1½ inches high. Such barriers shall not interfere with maneuvering into or out of the aisle. The loading-edge barrier (outer barrier) which functions as a loading ramp when the lift is at ground level, shall be sufficient when raised or closed, or a supplementary system shall be provided, to prevent a power wheelchair or mobility aid from riding over or defeating it. The outer barrier on the outboard of the lift shall automatically rise or close, or a supplementary system shall automatically engage, and remain raised, closed, or engaged at all times that the lift is more than 3 inches above the station platform or roadway and the lift is occupied. Alternatively, a barrier or system may be raised, lowered, opened, closed, engaged or disengaged by the lift operator provided an interlock or inherent design feature prevents the lift from rising unless the barrier is raised or closed or the supplementary system is engaged.

(6) *Platform surface*. The lift platform surface shall be free of any protrusions over ¼ inch high and shall be slip resistant. The lift platform shall have a minimum clear width of 28½ inches at the platform, a minimum clear width of 30 inches measured from 2 inches above the lift platform surface to 30 inches above the surface, and a minimum clear length of 48 inches measured from 2 inches above the surface of the platform to 30 inches above the surface. (See Fig. 1)

(7) *Platform gaps*. Any openings between the lift platform surface and the raised barriers shall not exceed ⅝ inch wide. When the lift is at vehicle floor height with the inner barrier (if applicable) down or retracted, gaps between the forward lift platform edge and vehicle floor shall not exceed ½

inch horizontally and ⅝ inch vertically. Platforms on semi-automatic lifts may have a hand hold not exceeding 1½ inches by 4½ inches located between the edge barriers.

(8) *Platform entrance ramp*. The entrance ramp, or loading-edge barrier used as a ramp, shall not exceed a slope of 1:8 measured on level ground, for a maximum rise of 3 inches, and the transition from the station platform or roadway to ramp may be vertical without edge treatment up to ¼ inch. Thresholds between ¼ inch and ½ inch high shall be beveled with a slope no greater than 1:2.

(9) *Platform deflection*. The lift platform (not including the entrance ramp) shall not deflect more than 3 degrees (exclusive of vehicle roll) in any direction between its unloaded position and its position when loaded with 600 pounds applied through a 26 inch by 28 inch test pallet at the centroid of the lift platform.

(10) *Platform movement*. No part of the platform shall move at a rate exceeding 8 inches/second during lowering and lifting an occupant, and shall not exceed 12 inches/second during deploying or stowing. This requirement does not apply to the deployment or stowage cycles of lifts that are manually deployed or stowed. The maximum platform horizontal and vertical acceleration when occupied shall be 0.3g.

(11) *Boarding direction*. The lift shall permit both inboard and outboard facing of wheelchairs and mobility aids.

(12) *Use by standees*. Lifts shall accommodate persons using walkers, crutches, canes or braces or who otherwise have difficulty using steps. The lift may be marked to indicate a preferred standing position.

(13) *Handrails*. Platforms on lifts shall be equipped with handrails, on two sides, which move in tandem with the lift which shall be graspable and provide support to standees throughout the entire lift operation. Handrails shall have a usable component at least 8 inches long with the lowest portion a minimum 30 inches above the platform and the highest portion a maximum 38 inches above the platform. The handrails shall be capable of withstanding a force of 100 pounds concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure. Handrails shall have a cross-sectional diameter between 1¼ inches and 1½ inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than ¼ inch. Handrails shall be placed to

provide a minimum 1½ inches knuckle clearance from the nearest adjacent surface. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the vehicle.

(c) *Vehicle ramp or bridge plate.*—(1) *Design load.* Ramps or bridge plates 30 inches or longer shall support a load of 600 pounds, placed at the centroid of the ramp or bridge plate distributed over an area of 28 inches, with a safety factor of at least 3 based on the ultimate strength of the material. Ramps or bridge plates shorter than 30 inches shall support a load of 300 pounds.

(2) *Ramp surface.* The ramp or bridge plate surface shall be continuous and slip resistant, shall not have protrusions from the surface greater than ¼ inch, shall have a clear width of 30 inches, and shall accommodate both four-wheel and three-wheel mobility aids.

(3) *Ramp threshold.* The transition from roadway or station platform and the transition from vehicle floor to the ramp or bridge plate may be vertical without edge treatment up to ¼ inch. Changes in level between ¼ inch and ½ inch shall be beveled with a slope no greater than 1:2.

(4) *Ramp barriers.* Each side of the ramp or bridge plate shall have barriers at least 2 inches high to prevent mobility aid wheels from slipping off.

(5) *Slope.* Ramps or bridge plates shall have the least slope practicable. If the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 3 inches or less above the station platform a maximum slope of 1:4 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 6 inches or less, but more than 3 inches, above the station platform a maximum slope of 1:6 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 9 inches or less, but more than 6 inches, above the station platform a maximum slope of 1:8 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is greater than 9 inches above the station platform a slope of 1:12 shall be achieved. Folding or telescoping ramps are permitted provided they meet all structural requirements of this section.

(6) *Attachment.*—(i) *Requirement.* When in use for boarding or alighting, the ramp or bridge plate shall be attached to the vehicle, or otherwise prevented from moving such that it is not subject to displacement when loading or unloading a heavy power mobility aid and that any gaps between vehicle and ramp or bridge plate, and

station platform and ramp or bridge plate, shall not exceed ⅝ inch.

(ii) *Exception.* Ramps or bridge plates which are attached to, and deployed from, station platforms are permitted in lieu of vehicle devices provided they meet the displacement requirements of paragraph (c)(6)(i) of this section.

(7) *Stowage.* A compartment, securement system, or other appropriate method shall be provided to ensure that stowed ramps or bridge plates, including portable ramps or bridges plates stowed in the passenger area, do not impinge on a passenger's wheelchair or mobility aid or pose any hazard to passengers in the event of a sudden stop.

(8) *Handrails.* If provided, handrails shall allow persons with disabilities to grasp them from outside the vehicle while starting to board, and to continue to use them throughout the boarding process, and shall have the top between 30 inches and 38 inches above the ramp surface. The handrails shall be capable of withstanding a force of 100 pounds concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure. The handrail shall have a cross-sectional diameter between 1¼ inches and 1½ inches or shall provide an equivalent grasping surface, and have "eased" edges with corner radii of not less than ⅝ inch. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the vehicle.

§ 38.85 Between-car barriers.

Where vehicles operate in a high-platform, level-boarding mode, devices or systems shall be provided to prevent, deter or warn individuals from inadvertently stepping off the platform between cars. Appropriate devices include, but are not limited to, pantograph gates, chains, motion detectors or other suitable devices.

§ 38.87 Public information system.

(a) Each vehicle shall be equipped with an interior public address system permitting transportation system personnel, or recorded or digitized human speech messages, to announce stations and provide other passenger information. Alternative systems or devices which provide equivalent access are also permitted.

(b) [Reserved]

Subpart E—Commuter Rail Cars and Systems

§ 38.91 General.

(a) New, used and remanufactured commuter rail cars, to be considered

accessible by regulations in part 37 of this title, shall comply with this subpart.

(b) If portions of the car are modified in such a way that it affects or could affect accessibility, each such portion shall comply, to the extent practicable, with the applicable provisions of this subpart. This provision does not require that inaccessible cars be retrofitted with lifts, ramps or other boarding devices.

(c)(1) Commuter rail cars shall comply with §§ 38.93(d) and 38.109 of this part for level boarding wherever structurally and operationally practicable.

(2) Where level boarding is not structurally or operationally practicable, commuter rail cars shall comply § 38.95 of this part.

(d) Existing vehicles retrofitted to comply with the "one-car-per-train rule" at § 37.93 of this title shall comply with §§ 38.93(e), 38.95(a) and 38.107 of this part and shall have, in new and key stations at least one door on each side from which passengers board which complies with § 38.93(d) of this part. Vehicles previously designed and manufactured in accordance with the program accessibility requirements of section 504 of the Rehabilitation Act of 1973, or implementing regulations of the Secretary of Transportation that were in effect before October 7, 1991; and which can be entered and used from stations in which they are to be operated, may be used to satisfy the requirements of § 37.93 of this title.

§ 38.93 Doorways.

(a) *Clear width.* (1) At least one door on each side of the car from which passengers board opening onto station platforms and at least one adjacent doorway into the passenger coach compartment, if provided, shall have a minimum clear opening of 32 inches.

(2) If doorways connecting adjoining cars in a multi-car train are provided, and if such doorway is connected by an aisle with a minimum clear width of 30 inches to one or more spaces where wheelchair or mobility aid users can be accommodated, then such doorway shall have, to the maximum extent practicable in accordance with the regulations issued under the Federal Railroad Safety Act of 1970 (49 CFR parts 229 and 231), a clear opening of 30 inches.

(b) *Passageways.* A route at least 32 inches wide shall be provided from doors required to be accessible by paragraph (a)(1) of this section to seating locations complying with § 38.95(d) of this part. In cars where such doorways require passage through a vestibule, such vestibule shall have a minimum width of 42 inches. (See Fig. 3.)

(c) *Signals.* If doors to the platform close automatically or from a remote location, auditory and visual warning signals shall be provided to alert passengers or closing doors.

(d) *Coordination with boarding platform—(1) Requirements.* Cars operating in stations with high platforms, or mini-high platforms, shall be coordinated with the boarding platform design such that the horizontal gap between a car at rest and the platform shall be no greater than 3 inches and the height of the car floor shall be within plus or minus $\frac{1}{8}$ inch of the platform height. Vertical alignment may be accomplished by car air suspension, platform lifts or other devices, or any combination.

(2) *Exception.* New vehicles operating in existing stations may have a floor height within plus or minus $1\frac{1}{2}$ inches of the platform height. At key stations, the horizontal gap between at least one accessible door of each such vehicle and the platform shall be no greater than 3 inches.

(3) *Exception.* Where platform setbacks do not allow the horizontal gap or vertical alignment specified in paragraph (d)(1) or (d)(2) of this section, car, platform or portable lifts complying with § 38.95(b) of this part, or car or platform ramps or bridge plates, complying with § 38.95(c) of this part, shall be provided.

(4) *Exception.* Retrofitted vehicles shall be coordinated with the platform in new and key stations such that the horizontal gap shall be no greater than 4 inches and the height of the vehicle floor, under 50% passenger load, shall be within plus or minus 2 inches of the platform height.

(e) *Signage.* The International Symbol of Accessibility shall be displaced on the exterior of all doors complying with this section unless all cars are accessible and are not marked by the access symbol (see Fig. 8). Appropriate signage shall also indicate which accessible doors are adjacent to an accessible restroom, if applicable.

§ 38.95 Mobility aid accessibility.

(a)(1) *General.* All new commuter rail cars, other than level entry cars, covered by this subpart shall provide a level-change mechanism or boarding device (e.g., lift, ramp or bridge plate) complying with either paragraph (b) or (c) of this section; sufficient clearances to permit a wheelchair or mobility aid user to reach a seating location; and at least two wheelchair or mobility aid seating locations complying with paragraph (d) of this section.

(2) *Exception.* If portable or platform lifts, ramps or bridge plates meeting the

applicable requirements of this section are provided on station platforms or other stops required to be accessible, or mini-high platforms complying with § 38.93(d) are provided, the car is not required to be equipped with a car-borne device. Where each new car is compatible with a single platform-mounted access system or device, additional systems or devices are not required for each car provided that the single device could be used to provide access to each new car if passengers using wheelchairs or mobility aids could not be accommodated on a single car.

(b) *Car Lift—(1) Design load.* The design load of the lift shall be at least 600 pounds. Working parts, such as cables, pulleys, and shafts, which can be expected to wear, and upon which the lift depends for support of the load, shall have a safety factor of at least six, based on the ultimate strength of the material. Nonworking parts, such as platform, frame, and attachment hardware which would not be expected to wear, shall have a safety factor of at least three, based on the ultimate strength of the material.

(2) *Controls—(i) Requirements.* The controls shall be interlocked with the car brakes, propulsion system, or door, or shall provide other appropriate mechanisms or systems, to ensure that the car cannot be moved when the lift is not stowed and so the lift cannot be deployed unless the interlocks or systems are engaged. The lift shall deploy to all platform levels normally encountered in the operating environment. Where provided, each control for deploying, lowering, raising, and stowing the lift and lowering the roll-off barrier shall be of a monetary contact type requiring continuous manual pressure by the operator and shall not allow improper lift sequencing when the lift platform is occupied. The controls shall allow reversal of the lift operation sequence, such as raising or lowering a platform that is part way down, without allowing an occupied platform to fold or retract into the stowed position.

(ii) *Exception.* Where physical or safety constraints prevent the deployment at some stops of a lift having its long dimension perpendicular to the car axis, the transportation entity may specify a lift which is designed to deploy with its long dimension parallel to the car axis and which pivots into or out of the car while occupied (i.e., "rotary lift"). The requirements of paragraph (b)(2)(i) of this section prohibiting the lift from being stowed while occupied shall not apply to a lift design of this type if the stowed position is within the passenger compartment

and the lift is intended to be stowed while occupied.

(iii) *Exception.* The brake or propulsion system interlock requirement does not apply to a platform mounted or portable lift provided that a mechanical, electrical or other system operates to ensure that cars do not move when the lift is in use.

(3) *Emergency operation.* The lift shall incorporate an emergency method of deploying, lowering to ground or platform level with a lift occupant, and raising and stowing the empty lift if the power to the lift fails. No emergency method, manual or otherwise, shall be capable of being operated in a manner that could be hazardous to the lift occupant or to the operator when operated according to manufacturer's instructions, and shall not permit the platform to be stowed or folded when occupied, unless the lift is a rotary lift intended to be stowed while occupied.

(4) *Power or equipment failure.* Platforms stowed in a vertical position, and deployed platforms when occupied, shall have provisions to prevent their deploying, falling, or folding any faster than 12 inches/second or their dropping of an occupant in the event of a single failure of any load carrying component.

(5) *Platform barriers.* The lift platform shall be equipped with barriers to prevent any of the wheels of a wheelchair or mobility aid from rolling off the lift during its operation. A movable barrier or inherent design feature shall prevent a wheelchair or mobility aid from rolling off the edge closest to the car until the lift is in its fully raised position. Each side of the lift platform which, in its raised position, extends beyond the car shall have a barrier a minimum $1\frac{1}{2}$ inches high. Such barriers shall not interfere with maneuvering into or out of the car. The loading-edge barrier (outer barrier) which functions as a loading ramp when the lift is at ground or station platform level, shall be sufficient when raised or closed, or a supplementary system shall be provided, to prevent a power wheelchair or mobility aid from riding over or defeating it. The outer barrier of the lift shall automatically rise or close, or a supplementary system shall automatically engage, and remain raised, closed, or engaged at all times that the lift platform is more than 3 inches above the station platform and the lift is occupied. Alternatively, a barrier or system may be raised, lowered, opened, closed, engaged or disengaged by the lift operator provided an interlock or inherent design feature prevents the lift from rising unless the

barrier is raised or closed or the supplementary system is engaged.

(6) *Platform surface.* The lift platform surface shall be free of any protrusions over $\frac{1}{4}$ inch high and shall be slip resistant. The lift platform shall have a minimum clear width of 28 $\frac{1}{2}$ inches at the platform, a minimum clear width of 30 inches measured from 2 inches above the lift platform surface to 30 inches above the surface, and a minimum clear length of 48 inches measured from 2 inches above the surface of the platform to 30 inches above the surface. (See Fig. 1)

(7) *Platform gaps.* Any openings between the lift platform surface and the raised barriers shall not exceed $\frac{3}{8}$ inch wide. When the lift is at car floor height with the inner barrier down (if applicable) or retracted, gaps between the forward lift platform edge and car floor shall not exceed $\frac{1}{2}$ inch horizontally and $\frac{3}{8}$ inch vertically.

(8) *Platform entrance ramp.* The entrance ramp, or loading-edge barrier used as a ramp, shall not exceed a slope of 1:8, when measured on level ground, for a maximum rise of 3 inches, and the transition from station platform to ramp may be vertical without edge treatment up to $\frac{1}{4}$ inch. Thresholds between $\frac{1}{4}$ inch and $\frac{1}{2}$ inch high shall be beveled with a slope no greater than 1:2.

(9) *Platform deflection.* The lift platform (not including the entrance ramp) shall not deflect more than 3 degrees (exclusive of vehicle roll) in any direction between its unloaded position and its position when loaded with 600 pounds applied through a 26 inch by 26 inch test pallet at the centroid of the lift platform.

(10) *Platform movement.* No part of the platform shall move at a rate exceeding 6 inches/second during lowering and lifting an occupant, and shall not exceed 12 inches/second during deploying or stowing. This requirement does not apply to the deployment or stowage cycles of lifts that are manually deployed or stowed. The maximum platform horizontal and vertical acceleration when occupied shall be 0.3g.

(11) *Boarding direction.* The lift shall permit both inboard and outboard facing of wheelchairs and mobility aids.

(12) *Use by standees.* Lifts shall accommodate persons using walkers, crutches, canes or braces or who otherwise have difficulty using steps. The lift may be marked to indicate a preferred standing position.

(13) *Handrails.* Platforms on lifts shall be equipped with handrails, on two sides, which move in tandem with the lift which shall be graspable and provide support to standees throughout

the entire lift operation. Handrails shall have a usable component at least 8 inches long with the lowest portion a minimum 30 inches above the platform and the highest portion a maximum 38 inches above the platform. The handrails shall be capable of withstanding a force of 100 pounds concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure. The handrail shall have a cross-sectional diameter between 1 $\frac{1}{4}$ inches and 1 $\frac{1}{2}$ inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than $\frac{1}{8}$ inch. Handrails shall be placed to provide a minimum 1 $\frac{1}{2}$ inches knuckle clearance from the nearest adjacent surface. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the car.

(c) *Car ramp or bridge plate*—(1) *Design load.* Ramps or bridge plates 30 inches or longer shall support a load of 600 pounds, placed at the centroid of the ramp or bridge plate distributed over an area of 26 inches by 26 inches, with a safety factor of at least 3 based on the ultimate strength of the material. Ramps or bridge plates shorter than 30 inches shall support a load of 300 pounds.

(2) *Ramp surface.* The ramp or bridge plate surface shall be continuous and slip resistant, shall not have protrusions from the surface greater than $\frac{1}{4}$ inch high, shall have a clear width of 30 inches and shall accommodate both four-wheel and three-wheel mobility aids.

(3) *Ramp threshold.* The transition from station platform to the ramp or bridge plate and the transition from car floor to the ramp or bridge plate may be vertical without edge treatment up to $\frac{1}{4}$ inch. Changes in level between $\frac{1}{4}$ inch and $\frac{1}{2}$ inch shall be beveled with a slope no greater than 1:2.

(4) *Ramp barriers.* Each side of the ramp or bridge plate shall have barriers at least 2 inches high to prevent mobility aid wheels from slipping off.

(5) *Slope.* Ramps or bridge plates shall have the least slope practicable. If the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 3 inches or less above the station platform a maximum slope of 1:4 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 6 inches or less, but more than 3 inches, above the station platform a maximum slope of 1:6 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 9 inches or less, but more than 6 inches, above the station platform a maximum

slope of 1:8 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is greater than 9 inches above the station platform a slope of 1:12 shall be achieved. Folding or telescoping ramps are permitted provided they meet all structural requirements of this section.

(6) *Attachment*—(i) *Requirement.* When in use for boarding or alighting, the ramp or bridge plate shall be attached to the vehicle, or otherwise prevented from moving such that it is not subject to displacement when loading or unloading a heavy power mobility aid and that any gaps between vehicle and ramp or bridge plate, and station platform and ramp or bridge plate, shall not exceed $\frac{3}{8}$ inch.

(ii) *Exception.* Ramps or bridge plates which are attached to, and deployed from, station platforms are permitted in lieu of car devices provided they meet the displacement requirements of paragraph (c)(6)(i) of this section.

(7) *Stowage.* A compartment, securement system, or other appropriate method shall be provided to ensure that stowed ramps or bridge plates, including portable ramps or bridge plates stowed in the passenger area, do not impinge on a passenger's wheelchair or mobility aid or pose any hazard to passengers in the event of a sudden stop.

(8) *Handrails.* If provided, handrails shall allow persons with disabilities to grasp them from outside the car while starting to board, and to continue to use them throughout the boarding process, and shall have the top between 30 inches and 38 inches above the ramp surface. The handrails shall be capable of withstanding a force of 100 pounds concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure. The handrail shall have a cross-sectional diameter between 1 $\frac{1}{4}$ inches and 1 $\frac{1}{2}$ inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than $\frac{1}{8}$ inch. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the car.

(d) *Mobility aid seating location.* Spaces for persons who wish to remain in their wheelchairs or mobility aids shall have a minimum clear floor space 48 inches by 30 inches. Such spaces shall adjoin, and may overlap, an accessible path. Not more than 6 inches of the required clear floor space may be accommodated for footrests under another seat provided there is a minimum of 9 inches from the floor to the lowest part of the seat overhanging the space. Seating spaces may have

fold-down or removable seats to accommodate other passengers when a wheelchair or mobility aid user is not occupying the area, provided the seats, when folded up, do not obstruct the clear floor space required. (See Fig. 2.)

§ 38.97 Interior circulation, handrails and stanchions.

(a) Where provided, handrails or stanchions within the passenger compartment shall be placed to permit sufficient turning and maneuvering space for wheelchairs and other mobility aids to reach a seating location, complying with § 38.95(d) of this part, from an accessible entrance. The diameter or width of the gripping surface of interior handrails and stanchions shall be 1¼ inches to 1½ inches or shall provide an equivalent gripping surface. Handrails shall be placed to provide a minimum 1½ inches knuckle clearance from the nearest adjacent surface.

(b) Where provided, handrails or stanchions shall be sufficient to permit safe boarding, on-board circulation, seating and standing assistance, and alighting by persons with disabilities.

(c) At entrances equipped with steps, handrails or stanchions shall be provided in the entrance to the car in a configuration which allows passengers to grasp such assists from outside the car while starting to board, and to continue using such assists throughout the boarding process, to the extent permitted by part 231 of this title.

§ 38.99 Floors, steps and thresholds.

(a) Floor surfaces on aisles, step treads, places for standees, and areas where wheelchair and mobility aid users are to be accommodated shall be slip-resistant.

(b) All thresholds and step edges shall have a band of color(s) running the full width of the step or threshold which contrasts from the step tread and riser or adjacent floor, either light-on-dark or dark-on-light.

§ 38.101 Lighting

(a) Any stepwell or doorway with a lift, ramp or bridge plate shall have, when the door is open, at least 2 footcandles of illumination measured on the step tread, ramp, bridge plate, or lift platform.

(b) The doorways of cars not operating at lighted station platforms shall have outside lights which, when the door is open, provide at least 1 footcandle of illumination on the station platform surface for a distance of 3 feet perpendicular to all points on the bottom step tread edge. Such lights shall

be shielded to protect the eyes of entering and exiting passengers.

§ 38.103 Public information system.

(a) Each car shall be equipped with an interior public address system permitting transportation system personnel, or recorded or digitized human speech messages, to announce stations and provide other passenger information. Alternative systems or devices which provide equivalent access are also permitted.

(b) [Reserved]

§ 38.105 Priority seating signs.

(a) Each car shall contain sign(s) which indicate that certain seats are priority seats for persons with disabilities and that other passengers should make such seats available to those who wish to use them.

(b) Characters on signs required by paragraph (a) shall have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10, with a minimum character height (using an upper case "X") of ⅝ inch, with "wide" spacing (generally, the space between letters shall be ⅜ the height of upper case letters), and shall contrast with the background either light-on-dark or dark-on-light.

§ 38.107 Restrooms.

(a) If a restroom is provided for the general public, it shall be designed so as to allow a person using a wheelchair or mobility aid to enter and use such restroom as specified in paragraphs (a) (1) through (5) of this section.

(1) The minimum clear floor area shall be 35 inches by 60 inches. Permanently installed fixtures may overlap this area a maximum of 8 inches, if the lowest portion of the fixture is a minimum of 9 inches above the floor, and may overlap a maximum of 19 inches, if the lowest portion of the fixture is a minimum of 29 inches above the floor, provided such fixtures do not interfere with access to the water closet. Fold-down or retractable seats or shelves may overlap the clear floor space at a lower height provided they can be easily folded up or moved out of the way.

(2) The height of the water closet shall be 17 inches to 19 inches measured to the top of the toilet seat. Seats shall not be sprung to return to a lifted position.

(3) A grab bar at least 24 inches long shall be mounted behind the water closet, and a horizontal grab bar at least 40 inches long shall be mounted on at least one side wall, with one end not more than 12 inches from the back wall, at a height between 33 inches and 38 inches above the floor.

(4) Faucets and flush controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N). Controls for flush valves shall be mounted no more than 44 inches above the floor.

(5) Doorways on the end of the enclosure, opposite the water closet, shall have a minimum clear opening width of 32 inches. Doorways on the side wall shall have a minimum clear opening width of 39 inches. Door latches and hardware shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.

(b) Restrooms required to be accessible shall be in close proximity to at least one seating location for persons using mobility aids and shall be connected to such a space by an unobstructed path having a minimum width of 32 inches.

§ 38.109 Between-car barriers.

Where vehicles operate in a high-platform, level-boarding mode, and where between-car bellows are not provided, devices or systems shall be provided to prevent, deter or warn individuals from inadvertently stepping off the platform between cars. Appropriate devices include, but are not limited to, pantograph gates, chains, motion detectors or other suitable devices.

Subpart F—Intercity Rail Cars and Systems

§ 38.111 General.

(a) New, used and remanufactured intercity rail cars, to be considered accessible by regulations in part 37 of this title shall comply with this subpart to the extent required for each type of car as specified below.

(1) Single-level rail passenger coaches and food service cars (other than single-level dining cars) shall comply with §§ 38.113 through 38.123 of this part. Compliance with § 38.125 of this part shall be required only to the extent necessary to meet the requirements of paragraph (d) of this section.

(2) Single-level dining and lounge cars shall have at least one connecting doorway complying with § 38.113(a)(2) of this part connected to a car accessible to persons using wheelchairs or mobility aids, and at least one space complying with §§ 38.125(d) (2) and (3) of this part, to provide table service to a person who wishes to remain in his or her wheelchair, and space to fold and

store a wheelchair for a person who wishes to transfer to an existing seat.

(3) Bi-level dining cars shall comply with §§ 38.113(a)(2), 38.115(b), 38.117(a), and 38.121 of this part.

(4) Bi-level lounge cars shall have doors on the lower level, on each side of the car from which passengers board, complying with § 38.113, a restroom complying with § 38.123, and at least one space complying with § 38.125(d) (2) and (3) to provide table service to a person who wishes to remain in his or her wheelchair and space to fold and store a wheelchair for a person who wishes to transfer to an existing seat.

(5) Restrooms, complying with § 38.123 shall be provided in single-level rail passenger coaches and food services cars adjacent to the accessible seating locations required by paragraph (d) of this section. Accessible restrooms are required in dining and lounge cars only if restrooms are provided for other passengers.

(6) Sleeper cars shall comply with §§ 38.113 (b) through (d), 38.115 through 38.121, and 38.125, of this part, and have at least one compartment which can be entered and used by a person using a wheelchair or mobility aid and complying with § 38.127 of this part.

(b)(1) If physically and operationally practicable, intercity rail cars shall comply with § 38.113(d) of this part for level boarding.

(2) Where level boarding is not structurally or operationally practicable, intercity rail cars shall comply with § 38.125.

(c) If portions of the car are modified in a way that it affects or could affect accessibility, each such portion shall comply, to the extent practicable, with the applicable provisions of this subpart. This provision does not require that inaccessible cars be retrofitted with lifts, ramps or other boarding devices.

(d) Passenger coaches or food service cars shall have the number of spaces complying with § 38.125(d)(2) of this part and the number of spaces complying with § 38.125(d)(3) of this part, as required by § 37.91 of this title.

(e) Existing cars retrofitted to meet the seating requirements of § 37.91 of this title shall comply with § 38.113(e), § 38.123, § 38.125(d) of this part and shall have at least one door on each side from which passengers board complying with § 38.113(d) of this part. Existing cars designed and manufactured to be accessible in accordance with the Secretary of Transportation regulations implementing section 504 of the Rehabilitation Act of 1973 that were in effect before October 7, 1991, shall comply with § 38.125(a) of this part.

§ 38.113 Doorways.

(a) *Clear width.* (1) At least one doorway, on each side of the car from which passengers board, of each car required to be accessible by § 38.111(a) and where the spaces required by § 38.111(d) of this part are located, and at least one adjacent doorway into coach passenger compartments shall have a minimum clear opening width of 32 inches.

(2) Doorways at ends of cars connecting two adjacent cars, to the maximum extent practicable in accordance with regulations issued under the Federal Railroad Safety Act of 1970 (49 CFR parts 229 and 231), shall have a clear opening width of 32 inches to permit wheelchair and mobility aid users to enter into a single-level dining car, if available.

(b) *Passageway.* Doorways required to be accessible by paragraph (a) of this section shall permit access by persons using mobility aids and shall have an unobstructed passageway at least 32 inches wide leading to an accessible sleeping compartment complying with § 38.127 of this part or seating locations complying with § 38.125(d) of this part. In cars where such doorways require passage through a vestibule, such vestibule shall have a minimum width of 42 inches. (see Fig. 4)

(c) *Signals.* If doors to the platform close automatically or from a remote location, auditory and visual warning signals shall be provided to alert passengers of closing doors.

(d) *Coordination with boarding platforms.*—(1) *Requirements.* Cars which provide level-boarding in stations with high platforms shall be coordinated with the boarding platform or mini-high platform design such that the horizontal gap between a car at rest and the platform shall be no greater than 3 inches and the height of the car floor shall be within plus or minus $\frac{3}{8}$ inch of the platform height. Vertical alignment may be accomplished by car air suspension, platform lifts or other devices, or any combination.

(2) *Exception.* New cars operating in existing stations may have a floor height within plus or minus $1\frac{1}{2}$ inches of the platform height.

(3) *Exception.* Where platform set-backs do not allow the horizontal gap or vertical alignment specified in paragraph (d) (1) or (2), platform or portable lifts complying with § 38.125(b) of this part, or car or platform bridge plates, complying with § 38.125(c) of this part, may be provided.

(4) *Exception.* Retrofitted vehicles shall be coordinated with the platform in existing stations such that the horizontal gap shall be no greater than 4

inches and the height of the vehicle floor, under 50% passenger load, shall be within plus or minus 2 inches of the platform height.

(3) *Signage.* The International Symbol of Accessibility shall be displayed on the exterior of all doors complying with this section unless all cars and doors are accessible and are not marked by the access symbol (see fig. 8). Appropriate signage shall also indicate which accessible doors are adjacent to an accessible restroom, if applicable.

§ 38.115 Interior circulation, handrails and stanchions.

(a) Where provided, handrails or stanchions within the passenger compartment shall be placed to permit sufficient turning and maneuvering space for wheelchairs and other mobility aids to reach a seating location, complying with § 38.125(d) of this part, from an accessible entrance. The diameter or width of the gripping surface of interior handrails and stanchions shall be $1\frac{1}{4}$ inches to $1\frac{1}{2}$ inches or shall provide an equivalent gripping surface. Handrails shall be placed to provide a minimum $1\frac{1}{2}$ inches knuckle clearance from the nearest adjacent surface.

(b) Where provided, handrails and stanchions shall be sufficient to permit safe boarding, on-board circulation, seating and standing assistance, and alighting by persons with disabilities.

(c) At entrances equipped with steps, handrails or stanchions shall be provided in the entrance to the car in a configuration which allows passengers to grasp such assists from outside the car while starting to board, and to continue using such assists throughout the boarding process, to the extent permitted by part 231 of this title.

§ 38.117 Floors, steps and thresholds.

(a) Floor surfaces on aisles, step treads and areas where wheelchair and mobility aid users are to be accommodated shall be slip-resistant.

(b) All step edges and thresholds shall have a band of color(s) running the full width of the step or threshold which contrasts from the step tread and riser or adjacent floor, either light-on-dark or dark-on-light.

§ 38.119 Lighting.

(a) Any stepwell, or doorway with a lift, ramp or bridge plate, shall have, when the door is open, at least 2 foot-candles of illumination measured on the step tread, ramp, bridge plate or lift platform.

(b) The doorways of cars not operating at lighted station platforms

shall have outside lights which, when the door is open, provide at least 1 foot-candle of illumination on the station platform surface for a distance of 3 feet perpendicular to all points on the bottom step tread edge. Such lights shall be shielded to protect the eyes of entering and exiting passengers.

§ 38.121 Public information system.

(a) Each car shall be equipped with a public address system permitting transportation system personnel, or recorded or digitized human speech messages, to announce stations and provide other passenger information. Alternative systems or devices which provide equivalent access are also permitted.

(b) [Reserved].

§ 38.123 Restrooms.

(a) If a restroom is provided for the general public, and an accessible restroom is required by § 38.111 (a) and (e) of this part, it shall be designed so as to allow a person using a wheelchair or mobility aid to enter and use such restroom as specified in paragraphs (a) (1) through (5) of this section.

(1) The minimum clear floor area shall be 35 inches by 60 inches. Permanently installed fixtures may overlap this area a maximum of 6 inches, if the lowest portion of the fixture is a minimum of 9 inches above the floor, and may overlap a maximum of 19 inches, if the lowest portion of the fixture is a minimum of 29 inches above the floor. Fixtures shall not interfere with access to and use of the water closet. Fold-down or retractable seats or shelves may overlap the clear floor space at a lower height provided they can be easily folded up or moved out of the way.

(2) The height of the water closet shall be 17 inches to 19 inches measured to the top of the toilet seat. Seats shall not be sprung to return to a lifted position.

(3) A grab bar at least 24 inches long shall be mounted behind the water closet, and a horizontal grab bar at least 40 inches long shall be mounted on at least one side wall, with one end not more than 12 inches from the back wall, at a height between 33 inches and 36 inches above the floor.

(4) Faucets and flush controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N). Controls for flush valves shall be mounted no more than 44 inches above the floor.

(5) Doorways on the end of the enclosure, opposite the water closet, shall have a minimum clear opening width of 32 inches. Doorways on the

side wall shall have a minimum clear opening width of 39 inches. Door latches and hardware shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.

(b) Restrooms required to be accessible shall be in close proximity to at least one seating location for persons using mobility aids complying with § 38.125(d) of this part and shall be connected to such a space by an unobstructed path having a minimum width of 32 inches.

§ 38.125 Mobility aid accessibility.

(a)(1) *General.* All intercity rail cars, other than level entry cars, required to be accessible by §§ 38.111 (a) and (e) of this subpart shall provide a level-change mechanism or boarding device (e.g., lift, ramp or bridge plate) complying with either paragraph (b) or (c) of this section and sufficient clearances to permit a wheelchair or other mobility aid user to reach a seating location complying with paragraph (d) of this section.

(2) *Exception.* If portable or platform lifts, ramps or bridge plates meeting the applicable requirements of this section are provided on station platforms or other stops required to be accessible, or mini-high platforms complying with § 38.113(d) are provided, the car is not required to be equipped with a car-borne device.

(b) *Car Lift—(1) Design load.* The design load of the lift shall be at least 600 pounds. Working parts, such as cables, pulleys, and shafts, which can be expected to wear, and upon which the lift depends for support of the load, shall have a safety factor of at least six, based on the ultimate strength of the material. Nonworking parts, such as platform, frame, and attachment hardware which would not be expected to wear, shall have a safety factor of at least three, based on the ultimate strength of the material.

(2) *Controls—(i) Requirements.* The controls shall be interlocked with the car brakes, propulsion system, or door, or shall provide other appropriate mechanisms or systems, to ensure that the car cannot be moved when the lift is not stowed and so the lift cannot be deployed unless the interlocks or systems are engaged. The lift shall deploy to all platform levels normally encountered in the operating environment. Where provided, each control for deploying, lowering, raising, and stowing the lift and lowering the roll-off barrier shall be of a monetary contact type requiring continuous manual pressure by the operator and shall not allow improper lift sequencing when the lift platform is occupied. The

controls shall allow reversal of the lift operation sequence, such as raising or lowering a platform that is part way down, without allowing an occupied platform to fold or retract into the stowed position.

(ii) *Exception.* Where physical or safety constraints prevent the deployment at some stops of a lift having its long dimension perpendicular to the car axis, the transportation entity may specify a lift which is designed to deploy with its long dimension parallel to the car axis and which pivots into or out of the car while occupied (i.e., "rotary lift"). The requirements of paragraph (b)(2)(i) of this section prohibiting the lift from being stowed while occupied shall not apply to a lift design of this type if the stowed position is within the passenger compartment and the lift is intended to be stowed while occupied.

(iii) *Exception.* The brake or propulsion system interlocks requirement does not apply to platform mounted or portable lifts provided that a mechanical, electrical or other system operates to ensure that cars do not move when the lift is in use.

(3) *Emergency operation.* The lift shall incorporate an emergency method of deploying, lowering to ground or station platform level with a lift occupant, and raising and stowing the empty lift if the power to the lift fails. No emergency method, manual or otherwise, shall be capable of being operated in a manner that could be hazardous to the lift occupant or to the operator when operated according to manufacturer's instructions, and shall not permit the platform to be stowed or folded when occupied, unless the lift is a rotary lift and is intended to be stowed while occupied.

(4) *Power or equipment failure.* Platforms stowed in a vertical position, and deployed platforms when occupied, shall have provisions to prevent their deploying, falling, or folding any faster than 12 inches/second or their dropping of an occupant in the event of a single failure of any load carrying component.

(5) *Platform barriers.* The lift platform shall be equipped with barriers to prevent any of the wheels of a wheelchair or mobility aid from rolling off the lift during its operation. A movable barrier or inherent design feature shall prevent a wheelchair or mobility aid from rolling off the edge closest to the car until the lift is in its fully raised position. Each side of the lift platform which, in its raised position, extends beyond the car shall have a barrier a minimum 1½ inches high. Such barriers shall not interfere with

maneuvering into or out of the car. The loading-edge barrier (outer barrier) which functions as a loading ramp when the lift is at ground or station platform level, shall be sufficient when raised or closed, or a supplementary system shall be provided, to prevent a power wheelchair or mobility aid from riding over or defeating it. The outer barrier of the lift shall automatically rise or close, or a supplementary system shall automatically engage, and remain raised, closed, or engaged at all times that the lift platform is more than 3 inches above the station platform and the lift is occupied. Alternatively, a barrier or system may be raised, lowered, opened, closed, engaged or disengaged by the lift operator provided an interlock or inherent design feature prevents the lift from rising unless the barrier is raised or closed or the supplementary system is engaged.

(6) *Platform surface.* The lift platform surface shall be free of any protrusions over $\frac{1}{4}$ inch high and shall be slip resistant. The lift platform shall have a minimum clear width of 28½ inches at the platform, a minimum clear width of 30 inches measured from 2 inches above the lift platform surface to 30 inches above the surface, and a minimum clear length of 48 inches measured from 2 inches above the surface of the platform to 30 inches above the surface. (See Fig. 1.)

(7) *Platform gaps.* Any openings between the lift platform surface and the raised barriers shall not exceed $\frac{5}{8}$ inch wide. When the lift is at car floor height with the inner barrier (if applicable) down or retracted, gaps between the forward lift platform edge and car floor shall not exceed $\frac{1}{2}$ inch horizontally and $\frac{5}{8}$ inch vertically.

(8) *Platform entrance ramp.* The entrance ramp, or loading-edge barrier used as a ramp, shall not exceed a slope of 1:8, when measured on level ground, for a maximum rise of 3 inches, and the transition from station platform to ramp may be vertical without edge treatment up to $\frac{1}{4}$ inch. Thresholds between $\frac{1}{4}$ inch and $\frac{1}{2}$ inch high shall be beveled with a slope no greater than 1:2.

(9) *Platform deflection.* The lift platform (not including the entrance ramp) shall not deflect more than 3 degrees (exclusive of car roll) in any direction between its unloaded position and its position when loaded with 600 pounds applied through a 26 inch by 26 inch test pallet at the centroid of the lift platform.

(10) *Platform movement.* No part of the platform shall move at a rate exceeding 6 inches/second during lowering and lifting an occupant, and shall not exceed 12 inches/second

during deploying or stowing. This requirement does not apply to the deployment or stowage cycles of lifts that are manually deployed or stowed. The maximum platform horizontal and vertical acceleration when occupied shall be 0.3g.

(11) *Boarding direction.* The lift shall permit both inboard and outboard facing of wheelchairs and mobility aids.

(12) *Use by standees.* Lifts shall accommodate persons using walkers, crutches, canes or braces or who otherwise have difficulty using steps. The lift may be marked to indicate a preferred standing position.

(13) *Handrails.* Platforms on lifts shall be equipped with handrails, on two sides, which move in tandem with the lift, and which shall be graspable and provide support to standees throughout the entire lift operation. Handrails shall have a usable component at least 8 inches long with the lowest portion a minimum 30 inches above the platform and the highest portion a maximum 38 inches above the platform. The handrails shall be capable of withstanding a force of 100 pounds concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure. The handrail shall have a cross-sectional diameter between 1¼ inches and 1½ inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than $\frac{1}{8}$ inch. Handrails shall be placed to provide a minimum 1½ inches knuckle clearance from the nearest adjacent surface. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the car.

(c) *Car ramp or bridge plate*—(1) *Design load.* Ramps or bridge plates 30 inches or longer shall support a load of 600 pounds, placed at the centroid of the ramp or bridge plate distributed over an area of 26 inches by 26 inches, with a safety factor of at least 3 based on the ultimate strength of the material. Ramps or bridge plates shorter than 30 inches shall support a load of 300 pounds.

(2) *Ramp surface.* The ramp or bridge plate surface shall be continuous and slip resistant, shall not have protrusions from the surface greater than $\frac{1}{4}$ inch high, shall have a clear width of 30 inches and shall accommodate both four-wheel and three-wheel mobility aids.

(3) *Ramp threshold.* The transition from station platform to the ramp or bridge plate and the transition from car floor to the ramp or bridge plate may be vertical without edge treatment up to $\frac{1}{4}$ inch. Changes in level between $\frac{1}{4}$ inch

and $\frac{1}{2}$ inch shall be beveled with a slope no greater than 1:2.

(4) *Ramp barriers.* Each side of the ramp or bridge plate shall have barriers at least 2 inches high to prevent mobility aid wheels from slipping off.

(5) *Slope.* Ramps or bridge plates shall have the least slope practicable. If the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 3 inches or less above the station platform a maximum slope of 1:4 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 6 inches or less, but more than 3 inches, above the station platform a maximum slope of 1:6 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is 9 inches or less, but more than 6 inches, above the station platform a maximum slope of 1:8 is permitted; if the height of the vehicle floor, under 50% passenger load, from which the ramp is deployed is greater than 9 inches above the station platform a slope of 1:12 shall be achieved. Folding or telescoping ramps are permitted provided they meet all structural requirements of this section.

(6) *Attachment*—(i) *Requirement.* When in use for boarding or alighting, the ramp or bridge plate shall be attached to the vehicle, or otherwise prevented from moving such that it is not subject to displacement when loading or unloading a heavy power mobility aid and that any gaps between vehicle and ramp or bridge plate, and station platform and ramp or bridge plate, shall not exceed $\frac{5}{8}$ inch.

(ii) *Exception.* Ramps or bridge plates which are attached to, an deployed from, station platforms are permitted in lieu of car devices provided they meet the displacement requirements of paragraph (c)(6)(i) of this section.

(7) *Stowage.* A compartment, securement system, or other appropriate method shall be provided to ensure that stowed ramps or bridge plates, including portable ramps or bridge plates stowed in the passenger area, do not impinge on a passenger's wheelchair or mobility aid or pose any hazard to passengers in the event of a sudden stop.

(8) *Handrails.* If provided, handrails shall allow persons with disabilities to grasp them from outside the car while starting to board, and to continue to use them throughout the boarding process, and shall have the top between 30 inches and 38 inches above the ramp surface. The handrails shall be capable of withstanding a force of 100 pounds concentrated at any point on the handrail without permanent deformation of the rail or its supporting structure.

The handrail shall have a cross-sectional diameter between 1¼ inches and 1½ inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than ¼ inch. Handrails shall not interfere with wheelchair or mobility aid maneuverability when entering or leaving the car.

(d) *Seating*—(1) *Requirements*. All intercity rail cars required to be accessible by §§ 38.111 (a) and (e) of this subpart shall provide at least one, but not more than two, mobility aid seating location(s) complying with paragraph (d)(2) of this section; and at least one, but not more than two, seating location(s) complying with paragraph (d)(3) of this section which adjoin or overlap an accessible route with a minimum clear width of 32 inches.

(2) *Wheelchair or mobility aid spaces*. Spaces for persons who wish to remain in their wheelchairs or mobility aids shall have a minimum clear floor area 48 inches by 30 inches. Such space may have fold-down or removable seats for use when not occupied by a wheelchair or mobility aid user. (See Fig. 2.)

(3) *Other spaces*. Spaces for individuals who wish to transfer shall include a regular coach seat or dining car booth or table seat and space to fold and store the passenger's wheelchair.

§ 38.127 Sleeping compartments.

(a) Sleeping compartments required to be accessible shall be designed so as to allow a person using a wheelchair or mobility aid to enter, maneuver within and approach and use each element within such compartment. (See Fig. 5.)

(b) Each accessible compartment shall contain a restroom complying with § 38.123(a) which can be entered directly from such compartment.

(c) Controls and operating mechanisms (e.g., heating and air conditioning controls, lighting controls, call buttons, electrical outlets, etc.) shall be mounted no more than 48 inches, and no less than 15 inches, above the floor and shall have a clear floor area directly in front a minimum of 30 inches by 48 inches. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist.

Subpart G—Over-the-Road Buses and Systems

§ 38.151 General.

(a) New, used and remanufactured over-the-road buses, to be considered accessible by regulations in part 37 of this title, shall comply with this subpart.

(b) Over-the-road buses covered by § 37.7 (c) of this title shall comply with § 38.23 and this subpart.

§ 38.153 Doors, steps and thresholds.

(a) Floor surfaces on aisles, step treads and areas where wheelchair and mobility aid users are to be accommodated shall be slip-resistant.

(b) All step edges shall have a band of color(s) running the full width of the step which contrasts from the step tread and riser, either dark-on-light or light-on-dark.

(c) To the maximum extent practicable, doors shall have a minimum clear width when open of 30 inches, but in no case less than 27 inches.

§ 38.155 Interior circulation, handrails and stanchions.

(a) Handrails and stanchions shall be provided in the entrance to the vehicle in a configuration which allows passengers to grasp such assists from outside the vehicle while starting to board, and to continue using such handrails or stanchions throughout the boarding process. Handrails shall have a cross-sectional diameter between 1¼ inches and 1½ inches or shall provide an equivalent grasping surface, and have eased edges with corner radii of not less than ¼ inch. Handrails shall be placed to provide a minimum 1½ inches knuckle clearance from the nearest adjacent surface. Where on-board fare collection devices are used, a horizontal passenger assist shall be located between boarding passengers and the fare collection device and shall prevent passengers from sustaining injuries on the fare collection device or windshield in the event of a sudden deceleration. Without restricting the vestibule space, the assist shall provide support for a boarding passenger from the door through the boarding procedure. Passengers shall be able to lean against the assist for security while paying fares.

(b) Where provided within passenger compartments, handrails or stanchions shall be sufficient to permit safe on-board circulation, seating and standing assistance, and alighting by persons with disabilities.

§ 38.157 Lighting.

(a) Any stepwell or doorway immediately adjacent to the driver shall have, when the door is open, at least 2 foot-candles of illumination measured on the step tread.

(b) The vehicle doorway shall have outside light(s) which, when the door is open, provide at least 1 foot-candle of illumination on the street surface for a distance of 3 feet perpendicular to all

points on the bottom step tread outer edge. Such light(s) shall be located below window level and shielded to protect the eyes of entering and exiting passengers.

§ 38.159 Mobility aid accessibility. [Reserved]

Subpart H—Other Vehicles and Systems

§ 38.171 General.

(a) New, used and remanufactured vehicles and conveyances for systems not covered by other subparts of this part, to be considered accessible by regulations in part 37 of this title shall comply with this subpart.

(b) If portions of the vehicle or conveyance are modified in a way that affects or could affect accessibility, each such portion shall comply, to the extent practicable, with the applicable provisions of this subpart. This provision does not require that inaccessible vehicles be retrofitted with lifts, ramps or other boarding devices.

(c) Requirements for vehicles and systems not covered by this part shall be determined on a case-by-case basis by the Department of Transportation in consultation with the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).

§ 38.173 Automated guideway transit vehicles and systems.

(a) Automated Guideway Transit (AGT) vehicles and systems, sometimes called "people movers", operated in airports and other areas where AGT vehicles travel at slow speed, shall comply with the provisions of § 38.53 (a) through (c), and §§ 38.55 through 38.61 of this part for rapid rail vehicles and systems.

(b) Where the vehicle covered by paragraph (a) will operate in an accessible station, the design of vehicles shall be coordinated with the boarding platform design such that the horizontal gap between a vehicle door at rest and the platform shall be no greater than 1 inch and the height of the vehicle floor shall be within plus or minus ½ inch of the platform height under all normal passenger load conditions. Vertical alignment may be accomplished by vehicle air suspension or other suitable means of meeting the requirement.

(c) In stations where open platforms are not protected by platform screens, a suitable device or system shall be provided to prevent, deter or warn individuals from stepping off the platform between cars. Acceptable devices include, but are not limited to,

pantograph gates, chains, motion detectors or other appropriate devices.

(d) Light rail and rapid rail AGT vehicles and systems shall comply with subparts D and C of this part, respectively.

§ 38.175 High-speed rail cars, monorails and systems.

(a) All cars for high-speed rail systems, including but not limited to those using "maglev" or high speed steel-wheel-on-steel rail technology, and monorail systems operating primarily on dedicated rail (i.e., not used by freight trains) or guideway, in which stations are constructed in accordance with Part 37, Subpart C of this title, shall be designed for high-platform, level boarding and shall comply with § 38.111(a) of this part for each type of car which is similar to intercity rail, §§ 38.111(d), 38.113 (a) through (c) and (e), 38.115 (a) and (b), 38.117 (a) and (b), 38.121 through 38.123, 38.125(d), and 38.127 (if applicable) of this part. The design of cars shall be coordinated with the boarding platform design such that

the horizontal gap between a car door at rest and the platform shall be no greater than 3 inches and the height of the car floor shall be within plus or minus $\frac{5}{8}$ inch of the platform height under all normal passenger load conditions. Vertical alignment may be accomplished by car air suspension or other suitable means of meeting the requirement. All doorways shall have, when the door is open, at least 2 footcandles of illumination measured on the door threshold.

(b) All other high-speed rail cars shall comply with the similar provisions of subpart F of this part.

§ 38.177 Ferries, excursion boats and other vessels. [Reserved]

§ 38.179 Trams, and similar vehicles, and systems

(a) New and used trams consisting of a tractor unit, with or without passenger accommodations, and one or more passenger trailer units, including but not limited to vehicles providing shuttle service to remote parking areas,

between hotels and other public accommodations, and between and within amusement parks and other recreation areas, shall comply with this section. For purposes of determining applicability of 49 CFR 37.101, 37.103, or 37.105 the capacity of such a vehicle or "train" shall consist of the total combined seating capacity of all units, plus the driver, prior to any modification for accessibility.

(b) Each tractor unit which accommodates passengers and each trailer unit shall comply with § 38.25 and § 38.29 of this part. In addition, each such unit shall comply with § 38.23 (b) or (c) and shall provide at least one space for wheelchair or mobility aid users complying with § 38.23(d) of this part unless the complete operating unit consisting of tractor and one or more trailers can already accommodate at least two wheelchair or mobility aid users.

Figures in Part 38

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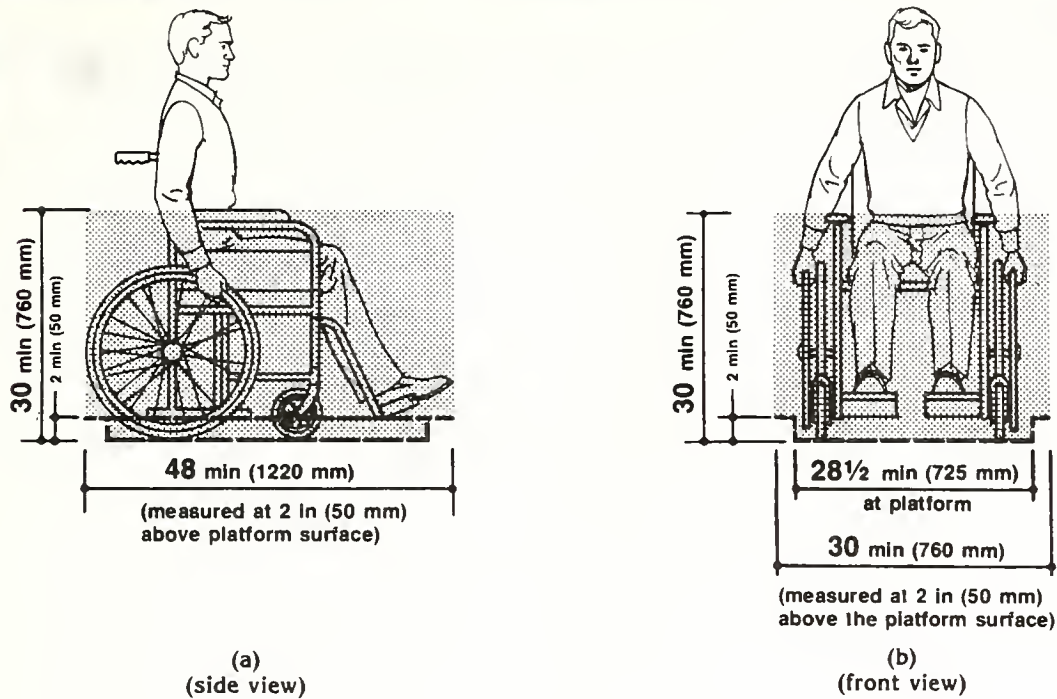


Fig. 1
Wheelchair or Mobility Aid Envelope

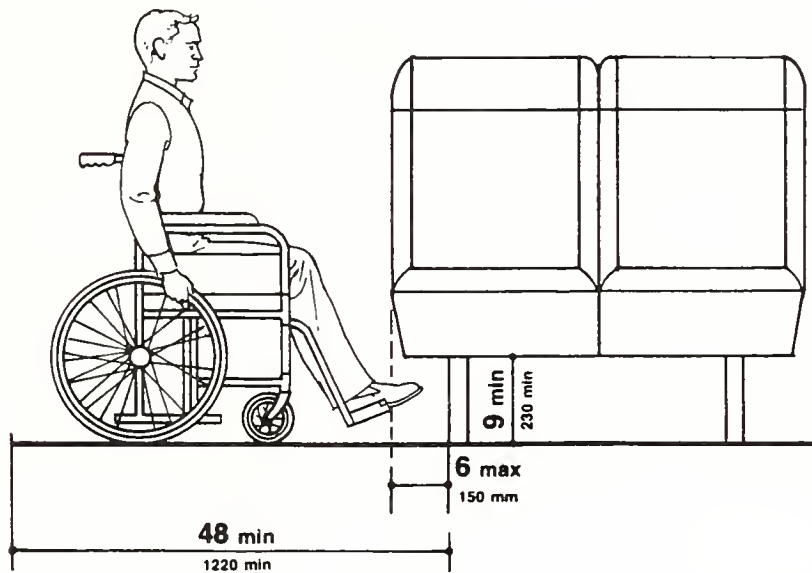


Fig. 2
Toe Clearance Under a Seat

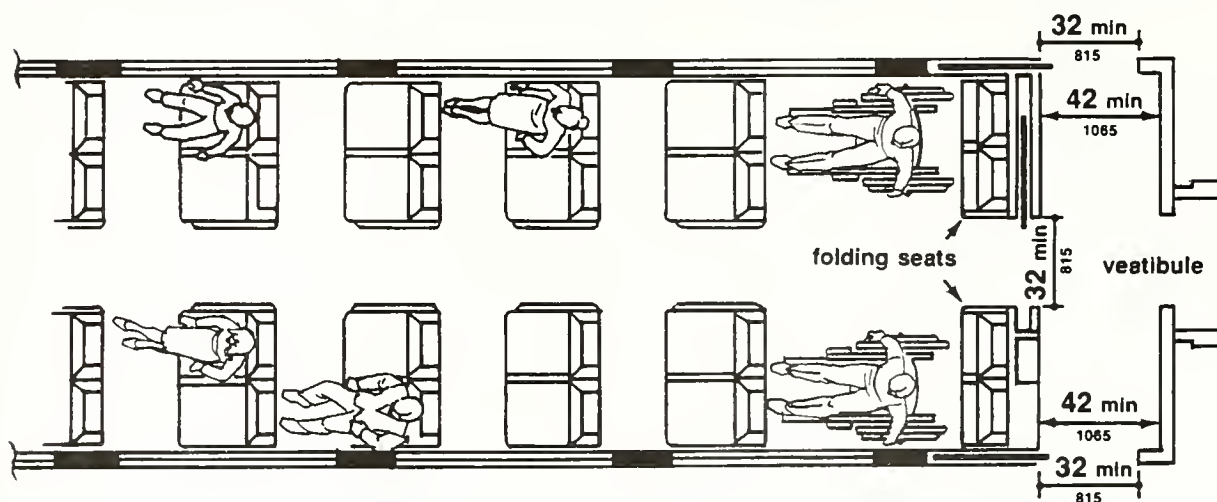


Fig. 3
Commuter Rail Car (without restrooms)

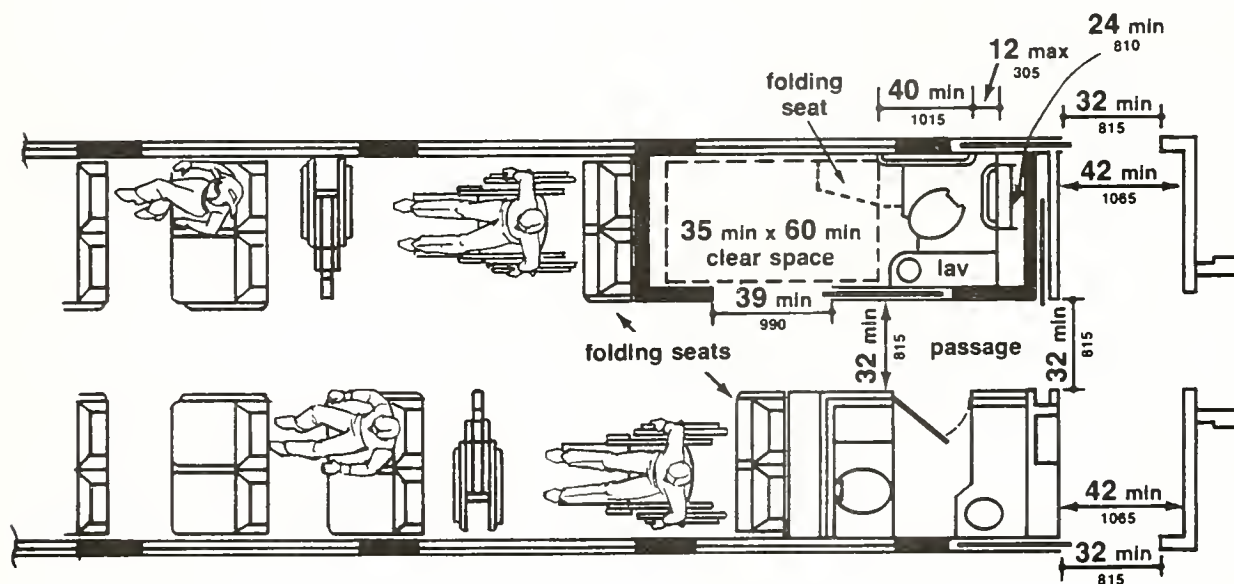


Fig. 4
Intercity Rail Car (with accessible restroom)

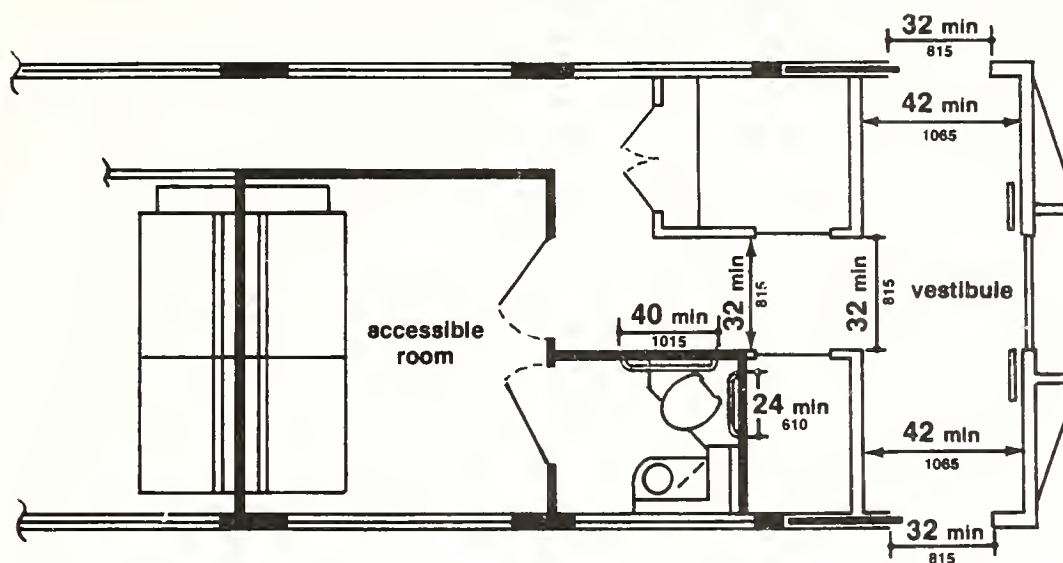
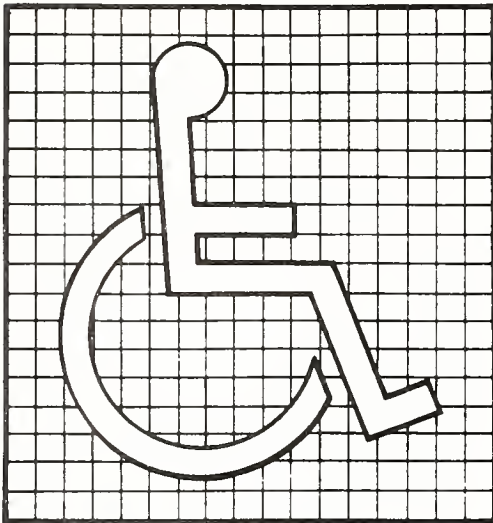


Fig. 5
Intercity Rail Car (with accessible sleeping compartment)



(a)
Proportions



(b)
Display Conditions

Fig. 6
International Symbol of Accessibility

Appendix to Part 38: Guidance Material

This appendix contains materials of advisory nature and provides additional information that should help the reader to understand the minimum requirements of the standards or to design vehicles for greater accessibility. Each entry is applicable to all subparts of this part except where noted. Nothing in this appendix shall in any way obviate any obligation to comply with the requirements of the standards themselves.

I. Slip Resistant Surface—Aisles, Steps, Floor Areas Where People Walk, Floor Areas in Securement Locations, Lift Platforms, Ramps

Slip resistance is based on the frictional force necessary to keep a shoe heel or crutch tip from slipping on a walking surface under conditions likely to be found on the surface. While the dynamic coefficient of friction during walking varies in a complex and non-uniform way, the static coefficient of friction, which can be measured in several ways, provides a close approximation of the slip resistance of a surface. Contrary to popular belief, some slippage is necessary to walking, especially for persons with restricted gaits; a truly "non-slip" surface could not be negotiated.

The Occupational Safety and Health Administration recommends that walking surfaces have a static coefficient of friction of 0.5. A research project sponsored by the Architectural and Transportation Barriers Compliance Board (Access Board) conducted tests with persons with disabilities and concluded that a higher coefficient of friction was needed by such persons. A static coefficient of friction of 0.6 is recommended for steps, floors, and lift platforms and 0.8 for ramps.

It is recognized that the coefficient of friction varies considerably due to the presence of contaminants, water, floor finishes, and other factors not under the control of transit providers and may be difficult to measure. Nevertheless, many common materials suitable for flooring are now labeled with information on the static coefficient of friction. While it may not be possible to compare one product directly with another, or to guarantee a constant measure, transit operators or vehicle designers and manufacturers are encouraged to specify materials with appropriate values. As more products include information on slip resistance, improved uniformity in measurement and specification is likely. The Access Board's advisory guidelines on Slip Resistant Surfaces provides additional information on this subject.

II. Color Contrast—Step Edges, Lift Platform Edges

The material used to provide contrast should contrast by at least 70%. Contrast in percent is determined by:

$$\text{Contrast} = [B - B'] / B' \times 100$$

Where B = light reflectance value (LRV) of the lighter area

and B' = light reflectance value (LRV) of the darker area.

Note that in any application both white and black are never absolute; thus, B never equals 100 and B' is always greater than 0.

III. Handrails and Stanchions

In addition to the requirements for handrails and stanchions for rapid, light, and commuter rail vehicles, consideration should be given to the proximity of handrails or stanchions to the area in which wheelchair or mobility aid users may position themselves. When identifying the clear floor space where a wheelchair or mobility aid user can be accommodated, it is suggested that at least one such area be adjacent or in close proximity to a handrail or stanchion. Of course, such a handrail or stanchion cannot encroach upon the required 32 inch width required for the doorway or the route leading to the clear floor space which must be at least 30 by 48 inches in size.

IV. Priority Seating Signs and Other Signage

A. *Finish and Contrast.* The characters and background of signs should be eggshell, matte, or other non-glare finish. An eggshell finish (11 to 19 degree gloss on 60 degree glossimeter) is recommended. Characters and symbols shall contrast with their background—either light characters on a dark background or dark characters on a light background. Research indicates that signs are more legible for persons with low vision when characters contrast with their background by at least 70 percent. Contrast in percent shall be determined by:

$$\text{Contrast} = [B - B'] / B' \times 100$$

Where B = light reflectance value (LRV) of the lighter area

and B' = light reflectance value (LRV) of the darker area.

Note that in any application both white and black are never absolute; thus, B never equals 100 and B' is always greater than 0.

The greatest readability is usually achieved through the use of light-colored characters or symbols on a dark background.

B. *Destination and Route Signs.* (The following specifications, which are required for buses (§ 38.39), are recommended for other types of vehicles, particularly light rail vehicles, where appropriate.)

1. Where destination or route information is displayed on the exterior of a vehicle, each vehicle shall have illuminated signs on the front and boarding side of the vehicle.

2. Characters on signs required by paragraph IV.B.1 of this appendix shall have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10, with a minimum character height (using an upper case "X") of 1 inch for signs on the boarding side and a minimum character height of 2 inches for front "headsigns," with "wide" spacing (generally, the space between letters shall be $\frac{1}{16}$ the height of upper case letters), and shall contrast with the background, either dark-on-light or light-on-dark, or as recommended above.

C. *Designation of Accessible Vehicles.* The International Symbol of Accessibility should be displayed as shown in Figure 6.

V. Public Information Systems

This section has been reserved and there currently is no requirement that vehicles be equipped with an information system which is capable of providing the same or

equivalent information to persons with hearing loss. While the Department assesses available and soon-to-be available technology during a study to be conducted during Fiscal Year 1992, entities are encouraged to employ whatever services, signage or alternative systems or devices that provide equivalent access and are available. Two possible types of devices are visual display systems and listening systems. However, it should be noted that while visual display systems accommodate persons who are deaf or are hearing impaired, assistive listening systems aid only those with a partial loss of hearing.

A. Visual Display Systems.

Announcements may be provided in a visual format by the use of electronic message boards or video monitors.

Electronic message boards using a light emitting diode (LED) or "flip-dot" display are currently provided in some transit stations and terminals and may be usable in vehicles. These devices may be used to provide real time or pre-programmed messages; however, real time message displays require the availability of an employee for keyboard entry of the information to be announced.

Video monitor systems, such as visual paging systems provided in some airports (e.g., Baltimore-Washington International Airport), are another alternative. The Architectural and Transportation Barriers Compliance Board (Access Board) can provide technical assistance and information on these systems ("Airport TDD Access: Two Case Studies," (1990)).

B. *Assistive Listening Systems.* Assistive listening systems (ALS) are intended to augment standard public address and audio systems by providing signals which can be received directly by persons with special receivers or their own hearing aids and which eliminate or filter background noise. Magnetic induction loops, infra-red and radio frequency systems are types of listening systems which are appropriate for various applications.

An assistive listening system appropriate for transit vehicles, where a group of persons or where the specific individuals are not known in advance, may be different from the system appropriate for a particular individual provided as an auxiliary aid or as part of a reasonable accommodation. The appropriate device for an individual is the type that individual can use, whereas the appropriate system for a station or vehicle will necessarily be geared toward the "average" or aggregate needs of various individuals. Earphone jacks with variable volume controls can benefit only people who have slight hearing loss and do not help people who use hearing aids. At the present time, magnetic induction loops are the most feasible type of listening system for people who use hearing aids equipped with "T-coils", but people without hearing aids or those with hearing aids not equipped with inductive pick-ups cannot use them without special receivers. Radio frequency systems can be extremely effective and inexpensive. People without hearing aids can use them, but people with hearing aids need a special receiver to use them as they are presently

designed. If hearing aids had a jack to allow a by-pass of microphones, then radio frequency systems would be suitable for people with and without hearing aids. Some listening systems may be subject to interference from other equipment and feedback from hearing aids of people who are using the systems. Such interference can be controlled by careful engineering design that anticipates feedback sources in the surrounding area.

The Architectural and Transportation Barriers Compliance Board (Access Board) has published a pamphlet on Assistive Listening Systems which lists demonstration centers across the country where technical assistance can be obtained in selecting and installing appropriate systems. The State of New York has also adopted a detailed technical specification which may be useful.

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APPENDIX B

Important Terms, Definitions, and Abbreviations

Appendix B

Important Terms, Definitions and Abbreviations

Accessible means, with respect to vehicles and facilities, complying with the accessibility requirements of 49 CFR Parts 37 and 38.

The Act or ADA means the Americans with Disabilities Act of 1990 (Pub. L. 101-336, 104 Stat. 327, 42 U.S.C. 12101-12213 and 47 U.S.C. 225 and 611), as it may be amended from time to time.

Administrator means Administrator of the Urban Mass Transportation Administration, or his or her designee.

Alteration means a change to an existing facility, including, but not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, changes or rearrangement in structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, reroofing, painting or wallpapering, asbestos removal, or changes to mechanical or electrical systems are not alterations unless they affect the usability of the building or facility.

APTA means the American Public Transit Association.

ATBCB or Access Board means the Architectural and Transportation Barriers Compliance Board.

Attendant means a person traveling as an aid, such as a personal care attendant, to facilitate travel by a person with a disability.

Auxiliary aids and services includes:

- (1) Qualified interpreters, notetakers, transcription services, written materials, telephone headset amplifiers, assistive listening devices, assistive listening systems, telephones compatible with hearing aids, closed caption decoders, closed and open captioning, text telephones (also known as telephone devices for the deaf, or TDDs), videotext displays, or other effective methods of making aurally delivered materials available to individuals with hearing impairments;
- (2) Qualified readers, taped texts, audio recordings, brailled materials, large print materials, or other effective methods of making visually delivered materials available to individuals with visual impairments;
- (3) Acquisition or modification of equipment or devices; or
- (4) Other similar services or actions.

Brokerage refers to a method of paratransit operation in which a central administering agency coordinates the provision of service by various operators for participating funding programs. Brokerage is explained in more detail in Section 3 of Chapter 6.

Bus means any of several types of self-propelled vehicles, generally rubber-tired, intended for use on city streets, highways, and busways, including but not limited to minibuses, forty- and thirty- foot buses, articulated buses, double-deck buses, and electrically powered trolley buses, used by public entities to provide designated public transportation service and by private entities to provide transportation service including, but not limited to, specified public transportation services. Self-propelled, rubber-tired vehicles designed to look like antique or vintage trolleys are considered buses.

Call-A-Lift-Bus describes a type of program that allows riders to call in advance and request that an accessible vehicle be placed on a specific fixed route at a specific time. This type of program is described in Section 3 of Chapter 6.

Capacity constraint is a limit on the amount of service that is provided or the amount of demand that is expressed. It is one of the six Service Criteria (see definition) used to define comparability of fixed route and complementary paratransit service. Can be caused by an action or circumstance, whether intended or unintended, which tends to limit demand. Can include the provision of poor service or specific actions and policies such as waiting lists, trip limits, and service denials.

Commerce means travel, trade, transportation, or communication among the several states, between any foreign country or any territory or possession and any state, or between points in the same state but through another state or foreign country.

Common wheelchair (see "Wheelchair").

Commuter authority means any state, local, regional authority, corporation, or other entity established for purposes of providing commuter rail transportation (including, but not necessarily limited to, the New York Metropolitan Transportation Authority, the Connecticut Department of Transportation, the Maryland Department of Transportation, the Southeastern Pennsylvania Transportation Authority, the New Jersey Transit Corporation, the Massachusetts Bay Transportation Authority, the Port Authority Trans-Hudson Corporation, and any successor agencies) and any entity created by one or more such agencies for the purposes of operating, or contracting for the operation of, commuter rail transportation.

Commuter bus service means fixed route bus service characterized by service predominantly in one direction during peak periods, limited stops, use of multi-ride tickets, and routes of extended length, usually between the central business district and outlying suburbs. Commuter bus service may also include other service, characterized by a limited route structure, limited stops, and a coordinated relationship to another mode of transportation.

Commuter rail transportation means short-haul rail passenger service operating in metropolitan and suburban areas, whether within or across the geographical boundaries of a state, usually characterized by reduced fare, multiple ride and communication tickets and by morning and evening peak period operations. This term does not include light or rapid rail transportation.

Commuter rail car means a rail passenger car obtained by a commuter authority for use in commuter rail transportation.

Companion means a person, other than an attendant, traveling with an ADA paratransit eligible customer and having the same origins and destinations as the eligible individual.

Contract means any formal or informal arrangement between parties for the provision of specified service.

Core service area means that portion of the complementary paratransit service area in which corridors with a width of three-fourths of a mile on each side of each fixed route merge together such that, with few and small exceptions, all origins and destinations within the area would be served.

Core service hours include peak periods of fixed route service use, as these periods are defined locally, consistent with industry practice.

CTAA means the Community Transportation Association of America.

Demand responsive system means any system of transporting individuals, including the provision of designated public transportation service by public entities and the provision of transportation service by private entities, including but not limited to specified public transportation service, which is not a fixed route system.

Designated public transportation means transportation provided by a public entity (other than public school transportation) by bus, rail, or other conveyance (other than transportation by aircraft or intercity or commuter rail transportation) that provides the general public with general or special service, including charter service, on a regular and continuing basis.

Disability means, with respect to an individual, a physical or mental impairment that substantially limits one or more of the major life activities of such individual; a record of such an impairment; or being regarded as having such an impairment.

(1) The phrase "physical or mental impairment" means -

(i) Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological, musculoskeletal, special sense organs, respiratory including speech organs, cardiovascular, reproductive, digestive, genito-urinary, hemic and lymphatic, skin, and endocrine;

(ii) Any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities.

(iii) The term "physical or mental impairment" includes, but is not limited to, such contagious or noncontagious diseases and conditions as orthopedic, visual, speech, and hearing impairments; cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, heart disease, diabetes, mental retardation, emotional illness, specific learning disabilities, HIV disease, tuberculosis, drug addiction and alcoholism.

(iv) The phrase "physical or mental impairment" does not include homosexuality or bisexuality.

(2) The phrase "major life activities" means functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.

(3) The phrase "has a record of such an impairment" means has a history of, or been misclassified as having, a mental or physical impairment that substantially limits one or more major life activities.

(4) The phrase "is regarded as having such an impairment" means--

(i) Having a physical or mental impairment that does not substantially limit major life activities, but which is treated by a public or private entity as constituting such a limitation;

(ii) Has a physical or mental impairment that substantially limits a major life activity only as a result of the attitudes of others toward such an impairment; or

(iii) Has none of the impairments defined in paragraph (1) of this definition but is treated by a public or private entity as having such an impairment.

(5) The term "disability" does not include --

(i) Transvestism, transsexualism, pedophilia, exhibitionism, voyeurism, gender identify disorders not resulting from physical impairments, or other sexual behavior disorders;

(ii) Compulsive gambling, kleptomania, or pyromania;

(iii) Psychoactive substance abuse disorders resulting from the current illegal use of drugs.

Environmental illness means an adverse health effect caused by the presence of foreign substances.

Facility means all or any portion of buildings, structures, sites, complexes, equipment, roads, walks, passageways, parking lots, or other real or personal property, including the site where the building, property, structure, or equipment is located.

Feeder service means providing a fixed route system user with paratransit service to or from an accessible station or stop.

Fixed route system means a system of transporting individuals (other than by aircraft), including the provision of designated public transportation service by public entities and the provision of transportation service by private entities, including but not limited to, specified public transportation service, on which a vehicle is operated along a prescribed route according to a fixed schedule.

High speed rail means a rail service having the characteristics of intercity rail service which operates primarily on a dedicated guideway or track not used, for the most part, by freight, including, but not limited to, trains on welded rail, magnetically levitated (maglev) vehicles on a special guideway, or other advanced technology vehicles, designed to travel at speeds in excess of those possible on other types of railroads.

Individual with a disability means a person who has a disability, but does not include an individual who is currently engaging in the illegal use of drugs, when a public or private entity acts on the basis of such use.

Intercity rail passenger car means a rail car, intended for use by revenue passengers, obtained by the National Railroad Passenger Corporation (Amtrak) for use in intercity rail transportation.

Intercity rail transportation means transportation provided by Amtrak.

Key routes are fixed routes along which there is service at least hourly throughout the day.

Light rail means a streetcar-type vehicle operated on city streets, semi-exclusive rights of way, or exclusive rights of way. Service may be provided by step-entry vehicles or by level boarding.

Mobility aid means a device, animal, or thing used by a person to facilitate travel. Can include equipment, such as a wheelchair, walker, or cane. Can also include a service animal such as a seeing eye dog.

New vehicle means a vehicle which is offered for sale or lease after manufacture without any prior use.

No-show refers to a person who misses a scheduled paratransit trip without canceling the trip far enough in advance to allow the schedule to be adjusted.

Operates includes, with respect to a fixed route or demand-responsive system, the provision of transportation service by the public or private entity itself or by a person under a contractual or other arrangement or relationship with the entity.

Origin-to-destination service means providing paratransit for the entire length of the trip without a transfer to the fixed route system.

Over-the-road bus means a bus characterized by an elevated passenger deck located over a baggage compartment.

Paratransit means comparable transportation service required by the ADA for individuals with disabilities who are unable to use fixed route transportation systems.

PCA means a personal care attendant (see "Attendant").

Point deviation describes a method of demand responsive operation under which vehicles arrive at designated checkpoints at specified times but do not follow fixed routes between checkpoints. This method of operation is explained in Section 3 of Chapter 6.

Private entity means any entity other than a public entity.

Project ACTION is a program funded by the Urban Mass Transportation Administration and managed by the National Easter Seal Society to promote and improve Accessible Community Transportation In Our Nation.

Public entity means:

- (1) Any state or local government;
- (2) Any department, agency, special purpose district, or other instrumentality of one or more state or local governments; and
- (3) The National Railroad Passenger Corporation (Amtrak) and any commuter authority.

Public school transportation means transportation by schoolbus vehicles of school children, personnel, and equipment to and from a public elementary or secondary school and school-related activities.

Purchase or lease with respect to vehicles, means the time at which an entity is legally obligated to obtain the vehicles, such as the time of contract execution.

Rapid rail means a subway-type transit vehicle railway operated on exclusive private rights of way with high level platform stations. Rapid rail also may operate on elevated or at grade level track separated from other traffic.

Remanufactured vehicle means a vehicle which has been structurally restored and has had new or rebuilt major components installed to extend its service life.

Response time is one of the six Service Criteria (see definition). Refers to the elapsed time between a request for service and the provision of service, where the provision of service is measured as the time the vehicle arrives to pick-up the rider.

Route deviation describes a method of operation under which vehicles can leave designated routes to pick-up or drop-off passengers. This type of operation is explained in Section 3 of Chapter 6.

Secretary means the Secretary of Transportation or his or her designee.

Section 504 means Section 504 of the Rehabilitation Act of 1973 (Pub. L. 93-112, 87 Stat. 394, 29 U.S.C. 794), as amended.

Securement area means the area on-board a vehicle designated for use by wheelchair-users.

Securement system means the equipment used on-board a vehicle to keep wheelchairs (see definition) stationary during transport and to protect passengers in the event of an accident or sudden unexpected movement. Can include both the equipment for affixing

the wheelchair to the vehicle and seat belts for use by the passengers.

Service animal means any guide dog, signal dog, or other animal individually trained to work or perform tasks for an individual with a disability, including, but not limited to, guiding individuals with impaired vision, alerting individuals with impaired hearing to intruders or sounds, providing minimal protection or rescue work, pulling a wheelchair, or fetching dropped items.

Service criteria means the six service measures used to define comparability between fixed route service and complementary paratransit service. The measures include service area, response time, fares, trip purpose, hours and days of service, and capacity constraints.

Service route is a vehicle route designed by taking into account the travel demands of persons with disabilities or other riders. Section 3 of Chapter 6 provides information about this transportation service concept.

Solicitation means the closing date for the submission of bids or offers in a procurement.

Specified public transportation means transportation by bus, rail, or any other conveyance (other than aircraft) provided by a private entity to the general public, with general or special service (including charter service) on a regular and continuing basis.

Station means, with respect to intercity and commuter rail transportation, the portion of a property located appurtenant to a right of way on which intercity or commuter rail transportation is operated, where such portion is used by the general public and is related to the provision of such transportation, including passenger platforms, designated waiting areas, restrooms, and, where a public entity providing rail transportation owns the property, concession areas to the extent that such public entity exercises control over the selection, design, construction, or alteration of the property, but this term does not include flag stops (i.e., stations which are not regularly scheduled stops but at which trains will stop board or detain passengers only on signal or advance notice).

Subscription Service means providing paratransit or demand responsive transportation over an extended period of time for repetitive trips for purposes including but not limited to employment, education, or ongoing medical treatment without requiring that a reservation be placed for each trip.

TDD means telecommunication display device, also known as a "text telephone". This device enables persons with hearing or speech impairments to send and receive typed messages via telephone.

Transit facility means, for purposes of determining the number of text telephones needed consistent with §10.3.1(12) of Appendix A of 49 CFR Part 37, a physical structure the primary function of which is to facilitate access to and from a transportation system which has scheduled stops at the structure. The term does not include an open structure or a physical structure the primary purpose of which is other than providing transportation services.

UMT Act means the Urban Mass Transportation Act of 1964, as amended (49 U.S.C. App. §1601 et seq.).

UMTA means the Urban Mass Transportation Administration of the United States Department of Transportation.

USDOT means the United States Department of Transportation.

Used vehicle means a vehicle with prior use.

User-side subsidy refers to a method of paratransit operation under which vouchers are sold to riders who are then able to call and receive service from any participating operator. Vouchers are provided to the operator in lieu of fare and are then submitted to the funding agency to verify that service was provided when payment for service is requested. This type of operation is discussed in Section 3 of Chapter 6.

Vanpool means a voluntary commuter ridesharing arrangement, using vans with a seating capacity greater than 7 persons (including the driver) or buses, which provides transportation to a group of individuals traveling directly from their homes to their regular places of work within the same geographical area, and in which the commuter/driver does not receive compensation beyond reimbursement for his or her costs of providing the service.

Vehicle, as the term is applied to private entities, does not include a rail passenger car, railroad locomotive, railroad freight car, or railroad caboose, or other rail rolling stock described in section 242 or Title III of the Act.

Wheelchair means a mobility aid belonging to any class of three or four wheeled devices, usable indoors, designed for and used by individuals with mobility impairments, whether operated manually or powered. A "common wheelchair" is such a device which does not exceed 30 inches in width and 48 inches in length measured two inches above the ground, and does not weigh more than 600 pounds when occupied.



APPENDIX C

Endorsements and Certifications

Individual plans must contain endorsements/certifications C.1, C.2, and C.3. Joint plans submitted in their entirety by January 26, 1992 must contain endorsements/certifications C.1, C.2, and C.3 from each participating public entity. All plans which include services provided by other entities must include C.4. Incomplete joint plans submitted on January 26, 1992 also must contain certifications C.5 and C.6 from each participating public entity.

- C.1 - Resolution Authorizing the Plan
- C.2 - MPO Certification of Paratransit Plan
- C.3 - Existing Paratransit Service Survey Certification
- C.4 - Included Service Certification
- C.4 - Joint Plan Certification I
- C.5 - Joint Plan Certification II

D

D

D

C.1 - Resolution Authorizing the Plan

This is to certify that the board of directors of _____ (name of submitting entity) _____
approved and adopted the ADA paratransit plan which is attached at a meeting on
_____ (date of board vote) _____.

signature

name of authorized official

title

date

NOTE: If the public entity does not function with a board of directors, a similar statement must be submitted by the entity's chief executive.

C.2 - MPO Certification of Paratransit Plan

The (name of Metropolitan Planning Organization) hereby certifies that it has reviewed the ADA paratransit plan prepared by (name of submitting entity (ies)) as required under 49 CFR 37.139(h) and finds it to be in conformance with the transportation plan developed under 49 CFR part 613 and 23 CFR part 450 (the UMTA/FHWA joint planning regulation). This certification is valid for one year.

signature

name of authorized official

title

date

C.3 - Existing Paratransit Service Survey

This is to certify that (name of public entity (ies)) has conducted a survey of existing paratransit services as required by 49 CFR 37.137 (a).

signature

name of authorized official

title

date

C.4 - Included Service Certification

This is to certify that service provided by other entities but included in the ADA paratransit plan submitted by (name of submitting entity (ies)) meets the requirements of 49 CFR part 37 subpart F providing that ADA eligible individuals have access to the service; the service is provided in the manner represented; and, that efforts will be made to coordinate the provision of paratransit service offered by other providers.

signature

name of authorized official

title

date

C.5 - Joint Plan Certification I

This is to certify that (name of public entity covered by joint plan) is committed to providing ADA paratransit service as part of this coordinated plan in conformance with the requirements of 49 CFR part 37 subpart F.

signature

name of authorized official

title

date

C.6 - Joint Plan Certification II

This is to certify that (name of public entity covered by joint plan) will, in accordance with 49 CFR 37.141, maintain current levels of paratransit service until the coordinated plan goes into effect.

signature

name of authorized official

title

date

APPENDIX D

Sample "Request for Certification of ADA Paratransit Eligibility" form

Sample "Request for Professional Verification" form

SAMPLE REQUEST FOR CERTIFICATION OF ADA PARATRANSIT ELIGIBILITY

The information obtained in this certification process will only be used by the (name of public entity) for the provision of transportation services. Information will only be shared with other transit providers to facilitate travel in those areas. The information will not be provided to any other person or agency.

1.	Name_____
2.	Address_____

	State_____ Zip_____
3.	Telephone Number (Home)_____ (Work)_____
4.	Date of Birth____/____/____

5.	What is the disability which prevents you from using our fixed route service?_____

Is this condition temporary?_____	
If Yes, expected duration until ____/____/____	

6.	How does this disability prevent you from using fixed route services? Please explain completely. Use an additional sheet if needed._____

7.	Are there any other effects of your disability of which we need to be aware?_____

THE FOLLOWING INFORMATION WILL BE USED TO ENSURE THAT AN APPROPRIATE VEHICLE IS UTILIZED TO PROVIDE YOUR TRANSPORTATION AND THAT AN ACCURATE ANALYSIS OF YOUR TRIP REQUESTS CAN BE MADE BY THE (NAME OF PUBLIC ENTITY).

8. Do you use any of the following aids to mobility? (Check all that apply)

Manual wheelchair___ Electric wheelchair___ Powered scooter___

Cane___ Crutches___ Personal care attendant___ Guide dog___

9. Do you require a Personal Care Attendant when you travel using transit?

Yes___ No___

10. Please Answer the following questions:

Can you travel 200 feet without the assistance of another person?

Yes___ No___ Sometimes___

Can you travel 1/4 mile without the assistance of another person?

Yes___ No___ Sometimes___

Can you travel (insert maximum corridor dimension) without the assistance of another person?

Yes___ No___ Sometimes___

Can you climb three 12-inch steps without assistance?

Yes___ No___ Sometimes___

Can you wait outside without support for ten minutes?

Yes___ No___ Sometimes___

11. I hereby certify that the information given above is correct.

Signed_____ Date___/___/___

12. If this application has been completed by someone other than the person requesting certification, that person must complete the following:

Name_____

Address_____

_____ State_____ Zip_____

Daytime Phone_____

Signed_____ Date____/____/____

In order to allow the (name of public entity) to evaluate your request, it may be necessary to contact a physician or other professional to confirm the information you have provided. Please complete the following information and authorization form.

The following physician____ Health Care Professional____ Rehabilitation Professional____ (check one) is familiar with my disability and is authorized to provide information to the (name of public entity) required to complete this certification.

Name_____

Address_____

State_____ Zip_____

Phone Number_____

Print Name_____ Date of Birth____/____/____

Signed_____ Date____/____/____

If the person has a visual impairment:

Visual Acuity with Best Correction:

Right Eye____

Left Eye____

Both Eyes____

Visual Fields:

Right Eye____

Left Eye____

Both Eyes____

If the person has a cognitive disability:

Is the person able to:

Give addresses and telephone numbers upon request?

Yes____ No____

Recognize a destination or landmark?

Yes____ No____

Deal with unexpected situations or unexpected change in routine?

Yes____ No____

Ask for, understand and follow directions?

Yes____ No____

Safely and effectively travel through crowded and/or complex facilities?

Yes____ No____

Is there any other effect of the disability of which the (name of public entity) should be aware? Please describe._____

Your Name:

Office Address:

Office Phone Number:

Signature:

SAMPLE REQUEST FOR PROFESSIONAL VERIFICATION

Dear

The attached authorization form has been submitted by _____, who has indicated that you can provide information regarding his/her disability and its impact upon his/her ability to utilize our transit services. Federal law requires that (name of public entity) provide paratransit services to persons who cannot utilize available fixed route services. The information you provide will allow us to make an appropriate evaluation of this request and its application to specific trip requests. Thank you for your cooperation in this matter.

Capacity in which you know the applicant:

Medical Diagnosis of condition causing disability:

Is the condition temporary? No____

Yes____ Expected duration until____/____/____

If the person has a disability effecting mobility:

Is the person:

Able to walk 200 feet without assistance? Yes____ No____
Sometimes_____

Able to walk 1/4 mile without assistance? Yes____ No____
Sometimes_____

Able to walk (maximum corridor dimension) without assistance?
Yes____ No____ Sometimes_____

Able to climb three 12-inch steps without assistance?
Yes____ No____ Sometimes_____

Able to wait outside without support for 10 minutes?
Yes____ No____ Sometimes_____

Does this person use any mobility aids? If so, what?

APPENDIX E

Making Communications and Information Accessible

E.1 - Accessible Communication

E.2 - Making Information Accessible

E.3 - Information about Braille Printers and Software

Sections E.1 and E.2 are reprinted from ***Achieving Physical and Communication Accessibility***, prepared by the National Center for Access Unlimited, Washington, DC, a non-profit collaboration of United Cerebral Palsy Associations, Inc. and Adaptive Environments Center, Inc.

Information about printers and software was provided by Mr. Joe Lazzaro of the Massachusetts Commission for the Blind.

E.1 - Accessible Communication

Many communication access improvements are inexpensive and easy to implement. Some of these improvements benefit people with speech impairments as well as those with hearing disabilities. Modifications include adding flashing lights to fire alarms, installing amplified handsets on telephones, providing an assistive listening system, and providing a TDD (Telecommunication Display Device). Access strategies can include features as simple as making paper and pencil available for writing messages, and maintaining a clear-sounding, adequately amplified public address system.

Telephone Amplifiers

The telephone company can install amplification devices on your pay phones. There are nominal monthly charges for the service. For amplification on other phones, contact AT&T's National Special Needs Center (800-233-1222 Voice, 800-833-3232 TDD). Their receivers work only on AT&T equipment. The cost varies; Centrex models are less than \$45. Also available are portable amplifiers for individual use and closed caption decoders for televisions.

The Hearing Aid Compatibility Act (P.L. 100-394) requires that all new phones must be compatible for use by people with hearing aids. To be compatible, phones must have an inductive coil, which can be installed by the phone company.

Telecommunication Display Device (TDD)

A TDD (Also called TTY, or teletypewriter) is a portable electronic machine used with a telephone. The TDD has a visual display and/or a printer so that both the caller and receiver can type and read their conversation. Portable TDDs are easy to use and affordable. Prices range from \$150 to \$1000 depending on the features provided. You may decide to use a TDD on an existing phone line or to get a separate dedicated line.

When you install a TDD, be sure to train your employees in its use. Publicize its availability by listing your telephone number in all your publications and publicity this format:

(800) 123-4567 (Voice or TDD)
or abbreviate: (V/TDD)

Telecommunication Relay Services

Telecommunication Relay Services enable someone using a TDD to communicate with someone using a telephone. Using TDDs, voice operators at the relay service act as a communication bridge between hearing people and deaf or hard of hearing people. If you are deaf or hard of hearing and want to contact a hearing person, or if you are a hearing person and want to call someone who uses a TDD, use the relay service.

The Americans with Disabilities Act mandates that, by July 26, 1993, all telephone companies must provide telecommunication relay services for individuals with hearing and speech disabilities. Many states already provide intrastate relay, so check with your telephone company, vocational rehabilitation agency, or commission for the deaf and hard of hearing. Because of the low cost of a TDD and the efficiency and desirability of one-to-one communication, it is recommended that businesses and agencies make themselves directly accessible through TDDs, rather than rely on relay services.

Telecommunication for People with Speech Disabilities

TDDs benefit people with speech disabilities as well as those with hearing disabilities. In addition, employees with speech disabilities who also have difficulty using their hands may prefer to use a headset or speaker phone instead of using the hand-held receiver.

Assistive Listening Systems

If your company has a meeting room, theater or auditorium, an assistive listening system will enhance the sound for people who are hard of hearing. Several systems are available: the audio loop system, the wireless FM system, and the wireless infrared system. The choice of systems is dependent upon a number of factors, including the intended users, the location, and the need for portability. For technical assistance, contact Self Help for Hard of Hearing People or the National Information Center on Deafness at Gallaudet University, or request the "Assistive Listening System" brochure from the Architectural and Transportation Barriers Compliance Board.

Interpreters

People who are deaf and hard of hearing persons often request interpreters in order to participate in conversations, meetings, and events. Sign language interpreters can use American Sign Language (ASL), Pidgin Signed English, or Signed English. Oral

interpreters paraphrase or mouth silently the spoken message and voice-interpret the speech of a deaf or hard of hearing person if necessary. The person who is deaf or hard of hearing should be consulted as to their preferred type of interpreting.

Fees for interpreters generally range from \$25 to \$40 an hour with a two hour minimum fee. Information on fees, use of interpreters, and other related information is available from state vocational rehabilitation agencies and commissions for the deaf and hard of hearing. In order to assure the availability of an interpreter, be sure to make your request as soon as your meeting or event is scheduled, preferably at least four weeks in advance.

Realtime Reporter Services

Recently, a new type of translation service, called "computer-aided realtime reporting", has become available as an option for deaf or hard of hearing people who read English fluently. Realtime reporters, trained as court stenographers, type what is said in a meeting, and the text is immediately displayed on a video monitor or projection screen. For assistance in obtaining this service, contact your local court stenotypist organization, Self Help for Hard of Hearing People, or other organization serving people who are deaf or hard of hearing.

Working With Interpreters and Stenotypists

Interpreters can work comfortably for about 45 minutes at a stretch, and stenotypists for about 30 to 45 minutes. To provide quality services, two interpreters or stenotypists are generally needed for assignments lasting over two hours. During conferences or workshops, several interpreters or stenotypists are required. If services are needed for more than two hours and only one interpreter or stenotypist is available, at least one 10- to 15- minute break is recommended.

Interpreters should always be in a visible, well-lit place near the presenters. When slides or films are shown, a spotlight or clamp-on light may be used to illuminate the interpreter. At all events, an area close to the interpreter and presenters should be reserved for people who are deaf or hard of hearing and for those sitting with them. In small group meetings, it is important that both the people who are deaf or hard of hearing and the interpreter sit where they can see and hear all participants. Round tables or circular seating arrangements are preferred.

E.2 - Making Information Accessible

Information about your organization's programs, services, location, proximity to public transportation, and hours of operation can be inaccessible to many people if the information is presented only in visual form. The following provisions can make information accessible to people who are blind or visually impaired:

Printed Materials

Prepare text according to the following principles to maximize legibility:

- o Narrow columns are easier to read than wide ones. Leave right margins ragged (not justified) for better readability.
- o Spacing between lines of print (leading) should be at least one-and-a-half or two point sizes larger than the point size of the print.
- o Spacing between letters (kerning) should not be too loose or too tight, and should be as even as possible.
- o Lower case letters with initial capitals are more legible than all capitals.
- o Black lettering on white paper is the most legible.
- o Sans-serif typefaces are often considered to be more legible than serif fonts, although for people with some types of visual disabilities, simple serif fonts may be easier to read. If possible, determine which type of font your intended audience prefers.

Large Print Materials

Many visually disabled people have some usable sight and can read large print. Large print materials can be made at low cost using a photocopier or a personal computer. Use a 14 point type size or larger. The type should be double-spaced and printed on a high-contrast background. When you are planning a conference or other event, estimate the number of large print materials needed by asking participants to notify you about their specific needs in advance. It is always a good idea to have a few large print copies of your standard materials available.

Braille

If brailled materials are needed, there are a number of resources which can provide you with small quantities. Be sure to make arrangements for transcription before you offer materials in braille. There is a great range in price for producing materials in braille, depending on turnaround time and the capacity of the providing organization. Some will work from a computer disk, others from printed material. Depending on your needs, you can select from a variety of sources.

Audio Tapes

Recording program materials on cassette tape is a good alternative to written information. Since some blind or visually impaired people cannot or prefer not to read braille or large print, tapes may be more useful. Tape duplicators, found on many stereo cassette decks, make copies easily and inexpensively. You can make the recordings yourself, if your machine records with good, clear sound quality, or you may wish to have your material recorded professionally.

Recording Tips

- o On each side of the tape, identify the side number and the document being read.
- o At the end of the recording, identify the reader. ("Your reader has been Joe Smith.")
- o Make sure the recording is done in a room where there is no background noise.
- o Read at a moderate pace and articulate words clearly.

Readers

If materials for blind or visually impaired people are not available, designate someone to be a reader. This is a stop-gap measure, but it will work if there is not a large volume of material to be read.

Adaptive Equipment

Reading machines are devices which look similar to photocopiers and literally "read" books out loud. Most are expensive, but many public, private, and university libraries provide them. Less expensive machines are becoming available. Computers also

can have voice output that enables them to "read" aloud the data from the disk. For further information on adaptive equipment, contact the National Federation of the Blind, or your state commission for the blind (see resource list Appendix K).

Radio Reading Services and Telephone Tapes

Radio reading services and telephone tapes provide blind and visually impaired people with a wide range of information. Radio reading services regularly read newspapers, periodicals, weather reports, and event calendars. Telephone tapes provide information about services and programs. These services are a great source of advertising once you have made your business accessible.

E.3 - Information about Braille Printers and Software

A wide variety of printers for preparing brailled material are available. They range in price from \$1,500 to \$30,000 and vary in their printing capacity. The chart below summarizes the general classes of printers that are available. Typical price ranges and printer speeds are indicated. The daily volume of material that can be produced without overworking the equipment also is listed.

Printer Classification	Price Range as of August, 1991	Capacity
Personal Class	\$1,500 - \$2,000	less than 20 cps* 5 - 10 pages/day
Business Class	\$3,500 - \$5,000	40 - 60 cps 75 - 150 pages/day
Production Class	\$10,000 - \$20,000	100+ cps 200 - 500 pages/day can interpoint**
High End	\$20,000 - \$30,000	200+ cps 500+ can interpoint**

* cps = characters per second

** interpoint means to print on both sides of a page

"Braille translation software", which can convert typical wordprocessing files to be compatible with braille printers, can be purchased for \$195 - \$495.

For information about companies that sell braille printers and software, contact you state vocational rehabilitation agency or state or local association for persons with visual impairments.

APPENDIX F

Information Regarding Undue Financial Burden Waiver Requests

- (1) When can undue financial burden waiver requests be submitted?
- (2) What requirements can be waived if an undue financial burden exists?
- (3) What factors will be considered by UMTA?
- (4) What information should be included in a waiver request?
- (5) What paratransit costs can be included?
- (6) How can paratransit costs be calculated?

Appendix F: Information Regarding Undue Financial Burden Waiver Requests

When can undue financial burden waiver requests be submitted?

A waiver request can only be submitted after all public participation requirements have been met. Public participation requirements are discussed in Section 2 of Chapter 7 of this handbook. A waiver request can be included in the initial paratransit plan submitted on January 26, 1992, if:

- o it is determined that full compliance with the six service criteria is not possible by January 26, 1997; or
- o it is determined that measured progress toward compliance cannot be made in any year of the implementation period. Measured progress means being able to meet an additional paratransit service criterion or improving an aspect of a specific service criterion. For example, in one year you can demonstrate that your paratransit fleet will grow by 25%, measurably reducing known capacity constraints.

A waiver can be requested when an annual plan update is submitted if circumstances have changed since the initial plan or the latest update was prepared and it is no longer possible to comply by January 26, 1997, or to make measured progress in any year before 1997.

What requirements can be waived if an undue financial burden exists?

Waivers only apply to the six service criteria contained in §37.131 of the USDOT regulations. The service criteria are described in Section 1 of Chapter 5 of this handbook. All other provisions of the regulations, including the eligibility requirements and the equipment and service standards must be met.

What Factors will be considered by UMTA?

The following factors will be considered by UMTA in the review of each undue financial burden waiver request:

- o the effects on current fixed route service, including reallocation of accessible fixed route vehicles and potential reduction in service, measured by service miles;

- o the average number of trips made by the entity's general population, on a per capita basis, compared with the average number of trips to be made by registered ADA paratransit eligible persons, on a per capita basis;
- o reductions in other services, including other special services;
- o increases in fares;
- o the resources available to implement complementary paratransit service over the period covered by the plan;
- o the percentage of budget needed to implement the plan, both as a percentage of operating budget and a percentage of entire budget;
- o the current level of accessible service, both fixed route and paratransit;
- o cooperation/coordination among area transportation providers;
- o evidence of increased efficiencies, that have been or could be realized, that would benefit the level and quality of available resources for complementary paratransit service; and
- o unique circumstances in the entity's area that affect the ability of the entity to provide paratransit, that contradict the need to provide paratransit, or in some other respect create a circumstance considered exceptional by the entity.

What information should be included in a waiver request?

The regulations do not specify the exact information that must be included in a waiver request. It is only required that the request include sufficient information for UMTA to consider each of the factors listed above.

In addition, waiver requests must include a description of the paratransit service that will be provided if the request is denied.

What paratransit costs can be included?

Only those costs attributable to the provision of ADA-required service can be included. Costs associated with service to persons who are not ADA paratransit eligible cannot be part of the waiver request. Similarly, costs associated with service to ADA paratransit eligible individuals which exceeds the service criteria cannot be included.

Only funds spent by entities responsible for providing service can be included. Funds to which the entity would be legally entitled, but which, as a matter of state or local funding arrangements, are provided to another entity and used by that entity to provide paratransit service which is part of a coordinated system of paratransit also may be counted.

How can paratransit costs be calculated?

If the recordkeeping system that is used cannot distinguish between trips mandated by the ADA and other trips on a trip-by-trip basis, a sampling procedure can be used to develop this information. A statistically valid methodology must be used.

Sampling procedures used for obtaining Section 15 demand-responsive bus system operating data can be used. UMTA Circular C 2710.2A provides procedures for Section 15 sampling for a demand responsive bus system.

The sample selection process involves selecting roughly one day per week throughout the year to perform the survey, and randomly selecting one vehicle for which data will be collected during the survey day.

In selecting the survey day, it is important that all days of the week be proportionately represented. Therefore Circular C 2710.2A suggests that every eighth day be selected. Thus if the first day selected for a survey is January 2, the second survey day would be January 10, the third would be January 18, and so forth. If the day selected is not a service day, the following day should be selected. The first day of service selected can but does not have to be chosen at random.

In selecting a vehicle, it is important to do a random selection from all operating vehicles on the survey day. This can be done by using a can of poker chips which are numbered so there is a one-to-one correspondence between the chips and the vehicles. Each survey day a chip is randomly drawn from the can. If a vehicle is selected which is not operating on the survey day, another chip should be drawn. The selected chip is replaced for the next drawing. While there are many other ways to do a random

selection, it is important not to select vehicles because they have "typical" or "representative" schedules. It is necessary as well to keep all vehicles in the pool so that each vehicle has an equal chance of being selected. This method is probably the simplest for small systems. For larger systems, there are computer programs available to assist in the random selection process.

Circular C 2710.2A contains a number of forms for recording and computing passenger and mileage information. Such forms can be adopted for the ADA information by adding a column for the total number of ADA eligible trips to the driver's log and to the summary information.

APPENDIX G

Paratransit and Fixed Route Service Information

- G.1 - Example of Paratransit Direct Operation: Paratransit, Inc. of Sacramento, California.
- G.2 - Example of Paratransit Brokerage: LISTs of Lancaster, Pennsylvania.
- G.3 - Example of Paratransit User-Side Subsidy: Milwaukee County's User-Side Subsidy Program.
- G.4 - MBTA "Call-A-Lift-Bus" Brochure.
- G.5 - "Service Route Networks: Bridging the Gap Between Paratransit and Fixed Route Bus Service", reprinted from Project ACTION Update, Summer, 1991.
- G.6 - Overview of Travel Training Models and recent article describing a joint travel training program in Massachusetts.

G.1 - Example of Paratransit Direct Operation

The following description of Paratransit, Inc. was taken, in part, from Center for Systems and Program Development, Inc., Best Practices in Specialized and Human Services Transportation Coordination, sponsored by U.S. Department of Health and Human Services and US DOT, Final Report, July 1989; and Crain & Associates, Inc., Paratransit, Inc.: Special Transportation Service in Sacramento, sponsored by UMTA, July 1981, Report No. UMTA-MA-06-0049-81-6.

Paratransit, Inc. was established in August 1978 in order to coordinate and consolidate special transit services that were being offered by 31 separate agencies. It has since served as a model for coordinating specialized transportation by establishing a partnership with the agencies contracting its services. This philosophy implies that Paratransit's riders are transportation consumers rather than clients. Therefore, the transit provider responds positively and attentively to riders' concerns. Paratransit places no restrictions on the kind of trip that can be made on its buses. For a private, non-profit, specialized transit agency, this is a unique operating philosophy which combats the misconception that older people and persons with disabilities have travel needs that differ from those of people who are able-bodied.

Transportation Services

Sacramento/Yolo Bus Service

Paratransit, Inc. operates two distinct transportation services: the Sacramento/Yolo Bus Service, a direct operation, and Senior Taxi Project, a supplemental user-side subsidy service. The Sacramento/Yolo Bus Service provides approximately 14,000 trips monthly over a 400 square-mile service area.

There are 43 vehicles in Paratransit's active fleet devoted to the Sacramento/Yolo Bus Service. The majority of the fleet is made up of 15-passenger modified buses. The inventory of equipment also includes various sized non-lift vans and a 19-passenger, lift-equipped bus. The number of list-assisted boardings has risen steadily and now exceeds 35% of all boardings. This increase is directly related to Paratransit's service philosophy: positively responsive, attentive, and with no restriction on the type of trip which can be made.

Service is provided Monday through Friday from 7 AM to 5 PM and operates in the Sacramento County area, in the general area served by Sacramento Regional Transit. Limited weekend and evening service is provided. Advanced reservations are required. Service is door-to-door and driver assistance is provided.

Because Paratransit, Inc. coordinates services for area human service agencies, the service is largely of a subscription nature, i.e., regular trips are provided on a daily basis for school, work or therapy. 75% of the daily trips are subscription service. The remaining 25% are intermittent services for shopping, medical appointments, recreational, etc. Paratransit's trip profile shows that 68% of the subscription rides are taken for developmental education. Social and recreational rides make up 33% of the intermittent bus trips.

Senior Taxi Project

Paratransit's Senior Taxi Project offers two services which receive 90% of their funding from the local Area Agency on Aging. The Senior Shared-Ride Taxi Service (SSRT) provides free taxi rides to about 475 elderly riders with the greatest social and economic needs, as defined by the Older Americans Act. The Taxi Coupon Program is a subsidy service extended to low-income and minority persons, aged 60 years or older, who live outside the SSRT service area. In 1989, 723 seniors receive \$24 in coupons every one-to-three months, to be redeemed at the time of the taxi trip. Life-sustaining medical, social/recreational, and shopping trips make up the majority of these rides. Both programs, however, have been closed to new participants because of funding restrictions.

Organization and Staffing

Paratransit is organized to allow the greatest support for its flexible, innovative program (see Figure F-1). The provider is governed by a nine-member board of directors, all appointed. Three represent the City of Sacramento, three are from the County of Sacramento, two from the Sacramento Regional Transit District (RT), and one from the Sacramento Area Council of Governments (SACOG). At least one of the city and county appointees is a consumer of Paratransit's services.

Because of its extensive operations, Paratransit has a relatively large staff for a specialized transportation system. The organization is operated from five functional areas. The administrative staff (Executive Director, Assistant Director, Administrative Assistant, an accountant, and a secretary) is responsible for the overall planning and control of the provider's daily business, its fiscal and regulatory relationships, and the organization and legislative efforts conducted on behalf of its ridership. The Manager of Fleet and Maintenance Operations works half-time in administration and half-time in maintenance.

The 15 scheduling and dispatch staff members are responsible for organizing rides for the system's passengers. The maintenance section employs 10 people in addition to the Manager, while the Mobility Training Program has a staff of two full-time and five

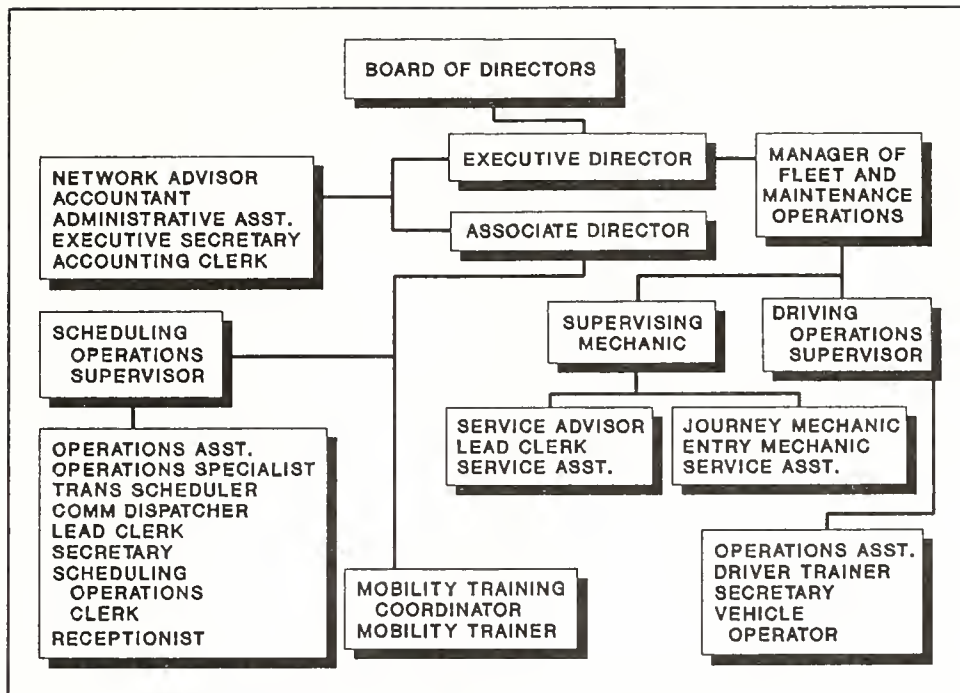


Figure F-1. Paratransit, Inc. Organizational Chart

part-time people.

The Driving Unit is the frontline operation of Paratransit. Administered by a supervisor, two trainers, and a secretary, there are 40 drivers in this unit-twelve full-time and 28 part-time. Safety is a priority and in the four years from 1986-1989, this unit has received citations from the Sacramento Safety Council celebrating its impressive record. The effectiveness of Paratransit's instructional program is recognized far beyond the providers' service area. The driver supervisor regularly travels throughout the country conducting training for drivers and driver trainers, and is certified by the National Transportation Safety Employees International Union, Local 22.

Coordination and Innovation

One of Paratransit's most notable features is the manner in which it is able to provide transportation to older persons and persons with disabilities, and coordinate the transit needs of a variety of agencies, while taking the initiative to make changes to improve methods of operation.

Coordination

State legislation adopted in 1980 required that each county designate a Consolidated Transportation Service Agency (CTSA). Paratransit was California's first CTSA. A four-party agreement (which included Sacramento County, the funding agency) designated

Paratransit responsible for all door-to-door transit services; the coordination and consolidation of social service agency transportation programs; and the operation of a centralized maintenance center. As Sacramento area's CTSA, Paratransit conducts a variety of activities to help coordinate transportation services provided by local human service agencies.

Beyond the close coordination with other agencies practiced by Paratransit as a Consolidated Transportation Service Agency (CTSA), effective ties to other systems are also maintained. The provider helped form and remains active in the California Association for Consolidated Transportation (CalACT). In conjunction with CalACT, Paratransit provided the leadership which resulted in the creation of a shared-risk, self-insurance pool that saves money for small bus operators statewide. Also, as part of its Ridership Policies, the provider developed an appeals process that has been called "...a model for other agencies" by the State of California Department of Transportation, and has been used as such by CalACT members. The State of California uses the system's driver training manual to develop statewide standards for vehicle operator training programs. Paratransit has often assisted other agencies and transit properties through coordinated vehicle purchases.

Innovation

Maintenance Facility

Paratransit's Maintenance Facility was started in the late 1970s as a demonstration project which focused on cost reductions for similar operations through joint purchasing and centralized management.

The Maintenance Facility provides low-cost maintenance service and fuel for Paratransit's fleet and for the vehicles of 30 human service agency transportation providers in the area, more than 180 vehicles in all. The facility specializes in lift equipment, small bus maintenance, and complete vehicle rehabilitation. The facility rebuilds small transit buses, and has rebuilt its own fleet and those of the City of Roseville and Yolo County.

Mobility Training Program

Since 1983, the Mobility Training Program has provided training to the elderly and persons with physical, developmental, or mental disabilities that interfere with their use of RT bus and light rail systems. The training includes familiarization with the RT systems, orientation to lift-equipped buses, and comprehensive training in all aspects of safe and effective bus and light rail use.

Training is conducted on a one-to-one basis and is tailored to the skills and capabilities of the trainee. Trainees include, but are

not limited to, clients of the Alta California Regional Center (Alta) and the Sacramento Employment and Training Agency (SETA). Alta normally funds training for persons with disabilities, and SETA funds training for low-income and minority senior citizens. Training costs for others are funded by the County of Sacramento.

Automation

Paratransit has developed sophisticated computer software which includes the capability to schedule vehicles on the basis of geographical distribution. Research was begun on the Paratransit Advance Reservation Routing and Scheduling (PARRAS) software package in April 1984, and it became fully operational in January 1986. Between then and 1989, intermittent trip requests increased by 96%.

With the PARRAS system, all trips are scheduled at one time by the computer, which examines hundreds or thousands of scheduling alternatives before making assignment decisions. Schedulers are free to do other work during this process, except when it is necessary to correct such things as barriers (rivers, etc.) not recognized by the computer, passengers scheduled in excess of available equipment, or special circumstances.

G.2 - Example of Paratransit Brokerage

The following description of the Lancaster Integrated Specialized Transportation System (LISTS) was taken, in part, from Center for Systems and Program Development, Inc., Best Practices in Specialized and Human Services Transportation Coordination, sponsored by U.S. Department of Health and Human Services and US DOT, Final Report, July 1989; and Charles River Associates Incorporated, LISTS: Transportation Brokerage for the Elderly and Handicapped in Lancaster, PA, sponsored by UMTA, Reprinted July 1986, Report No. UMTA-MA-06-0049-84-6.

LISTS is a non-profit broker of shared-ride, demand-responsive, door-to-door transportation in South Central Pennsylvania. LISTS was incorporated in 1977 to serve as transportation broker for the area as a result of recommendations from a feasibility study performed by the Lancaster County Planning Commission (LCPC). In May 1982, LISTS was designated as the sole provider for a transportation system in Lancaster County under the State's lottery funding for transportation.

In response to the specific characteristics of paratransit demand in the Lancaster area, LISTS was organized to deliver a variety of service types rather than simply offering trips. The types of service offered are defined primarily by origin and destination but also by other trip characteristics, such as evening service. Each service type has its own fare schedule and hours of operation. LISTS service is also differentiated by geographic sectors, which are used in its competitive bidding process for contracting with carriers. Each sector is served primarily by one carrier. Both of these administrative devices are used to promote ridesharing and to create an equitable assignment of transportation costs.

Throughout the six-sector service area, 60 human service agencies contract with LISTS for the provision of transportation services. LISTS has developed a fare schedule for agencies, reflecting the carriers' bid prices and a 15% surcharge. The largest client served by the system falls under the sponsorship of the Lancaster County Office of Aging.

In 1989, LISTS coordinated between 27,000 and 30,000 trips per month. The types of trips provided by LISTS are:

- Local senior center service between a client's home and the local Office of Aging multi-purpose center.
- Local rural and local urban services, which allow patrons to travel between a rural sector and Lancaster City. Several types of service are provided only on specific days of each week, for the purpose of maximum ridesharing.

- Feeder service to mass transit depots for clients who require specific medical treatment in neighboring counties. The broker also arranges with paratransit providers in other counties to transport clients to their final destination. A ticket is required for each transporter/ carrier and special arrangements must be made with LISTS to schedule a trip of this type.

LISTS provides these services for persons requiring the use of a wheelchair, as well as those who are ambulatory or semi-ambulatory. When requesting a trip, a wheelchair user must inform LISTS if he or she requires a lift- or ramp-equipped vehicle. LISTS also accommodates special transportation needs of agencies and their clients.

The Red Rose Transit Authority (RRTA), the publicly owned and operated bus system in Lancaster County, has a contract with LISTS to coordinate its user-side subsidy program, Special Efforts Transportation (SET). Under SET, persons with disabilities can use LISTS to travel anywhere in the Lancaster City sector. The non-ambulatory person using SET is transported by a local taxi company.

Further, LISTS markets the State's reduced-fare program, AdvANce, as a discount for older persons. AdvANce provides advance reservation rideshare and demand-responsive service to any older persons and persons with disabilities who live at least $\frac{1}{4}$ -mile from a bus route. The State reimburses the county 75% of the cost of each trip.

LISTS Administration

Organizational Structure

LISTS is a chartered corporation with a formal set of by-laws. The business of the corporation is managed by its Board of Directors, consisting of 9 to 15 members. One member represents each of the following bodies: Lancaster County, Lancaster City, and the LCPC. Other members are drawn from the elderly, persons with disabilities, low-income populations, human service agencies, transportation providers, and other interested citizens. The Board of Directors is responsible for LISTS policies and procedures, and directs the hiring of staff.

The chief Operating Officer of LISTS is the Executive Director, who is responsible to the LISTS Board (see Figure F-2). The director manages LISTS external activities, primarily carrier contracting, policy-related interactions with agencies, and ensuring adequate funding for administrative activities. The director also manages LISTS internal operations and supervises the LISTS staff.

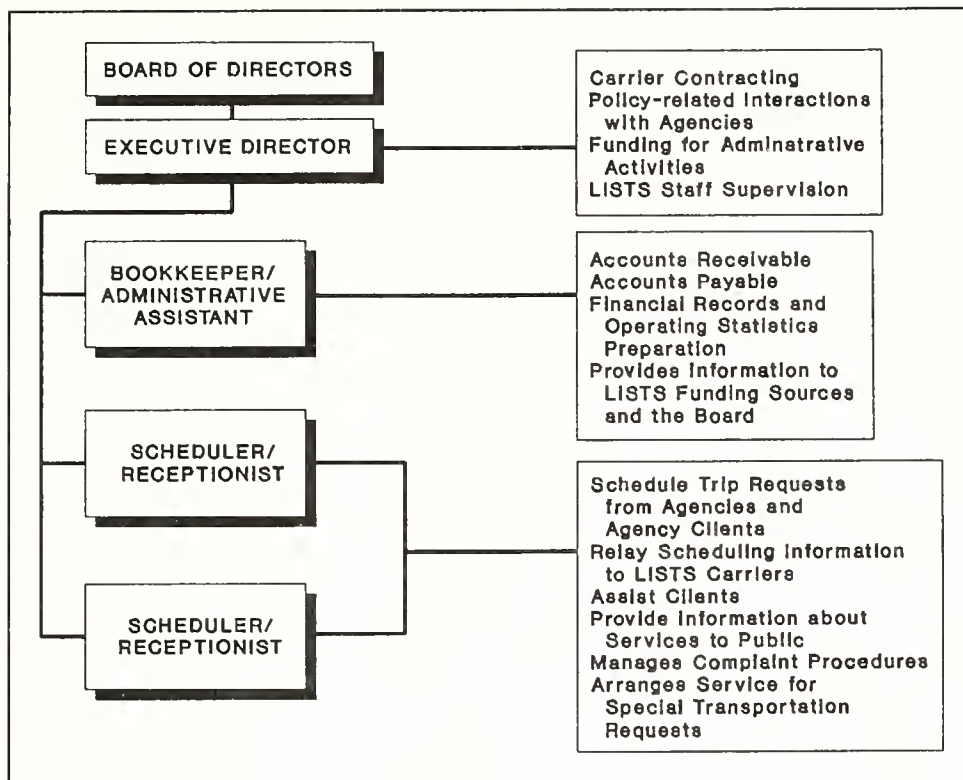


Figure F-2. LISTS Organizational Chart

Trip Scheduling

LISTS patrons must request service in advance of their trip. Schedulers use a separate transportation request form for scheduling trips in each sector.

With the volume of trips coordinated by LISTS, trip requests cannot be handled by only two schedulers. Thus, LISTS has developed scheduling procedures that allow two major categories of trips to be scheduled without the involvement of LISTS staff. First, the majority of agency trips are routine trips, composed largely of local-center trips carrying patrons from their homes to Office of Aging centers. The carriers have developed routes along which they routinely pick up and drop off center clients. Only exceptions to this routine network are forwarded by agencies to the carriers, via LISTS. Second, because of the high volume of service requests, most requests for local-urban service are made directly to the Lancaster City sector carrier. Patrons who have made previous local-urban service requests are familiar with this procedure; new patrons often call LISTS directly and schedule future trips with the carrier. Requests for local-rural service and direct-line service are scheduled by LISTS.

LISTS Tickets

Patrons obtain LISTS tickets, which are required for every trip, through agencies, in the case of agency-sponsored and SET Trips, and directly from LISTS for unsponsored AdvANce trips. The drivers must return all tickets, handed to them by each patron, to LISTS to receive payment for service provided.

Invoicing Agencies

LISTS keeps two financial accounts, an administrative account and a transportation account. The administrative account is used exclusively for funding LISTS administrative activities. The transportation account allows the transfer of payments by LISTS users to LISTS to the carriers.

Service at Low Cost

LISTS is committed to providing the best service to older people, low-income, persons with disabilities and others in Lancaster County at the lowest possible costs. LISTS concentrates on coordination and leaves service planning, outreach, and regulatory functions to the agencies.

LISTS has kept its commitment to the county by maintaining low per-trip cost, averaging (in 1989) \$3.94, including a 15% surcharge, is engendered by a very competitive network of carriers within each sector. LISTS sends its annual request-for-bids package to every carrier licensed by the Pennsylvania Utility Commission operating in the County. Bids are awarded on the basis of price, service quality, and the ability of the carrier to provide the necessary service. Contracts are awarded for a one-year period, although longer contracts for carriers are being considered. Although not-for-profit carriers are eligible to submit bids, all of the carriers contracted by LISTS until 1989 have been for-profit taxi and van companies.

Carriers are required to send all drivers involved with LISTS service to a driver sensitivity training session at the carriers' expense. Carriers are also required to purchase insurance coverage, which must meet or exceed the minimum established by LISTS.

To maintain their system, LISTS must balance the service requirements of the agencies against the carrier's desire for cost-cutting. To meet agency demands, LISTS has service standards that meet the minimum requirements of agencies for service. LISTS has also set up complaint procedures, which provide for communications from an agency to a carrier. LISTS asks agencies to adjust their schedules for productivity reasons, but an agency is under no obligation to do so. An agency that cannot adjust, however, usually must pay a higher cost of service.

To increase carrier productivity, LISTS preschedules many of its own trips, with maximum ridesharing as a goal. In rural sectors, LISTS service is available Monday through Friday. Evening and weekend service is also available by special request. In Lancaster City, LISTS service is available to agencies seven days a week.

Demand for direct-line trips, the most costly LISTS provides, is channeled into two or three days. Services are provided on the same day each week. Using LISTS may result in an agency having to schedule its client trips around LISTS schedule, rather than visa versa. This procedure allows LISTS to increase ridesharing and reduce costs.

G.3 - Example of Paratransit User-Side Subsidy

The following description of the Milwaukee County User-Side Subsidy Program (USSP) was taken, in part, from material provided by Milwaukee County, Department of Public Works, Professional Services Division; and Charles River Associates, Inc., The Milwaukee County User-Side Subsidy Program: A Case Study, sponsored by UMTA, Reprinted June 1984, Report No. UMTA-MA-06-0049-82-4.

The Milwaukee County USSP was established by the Milwaukee County Board of Supervisors and the Milwaukee County Executive in 1978 to provide subsidized transportation to persons with disabilities in Milwaukee County. This specialized transportation service utilizes taxicabs and ramp or lift-equipped vans to provide transportation service. In 1989, the program provided over 350,000 trips to 8,000 individuals.

Persons, age 7 and older, who have a functional transportation impairment are eligible for the program. In addition, disabled persons temporarily in Milwaukee County are also eligible to participate. Eligibility is determined by the program after an application has been filed and the disability of the applicant certified by a health professional.

To take a subsidized trip, an eligible client contacts one of the 13 companies contracted to provide USSP service. These companies include 1 taxi carrier and 12 van carriers. Most van services require advance reservations. Taxis provide more immediate response service. Subsidized trips can be taken for any purpose within the boundaries of Milwaukee County.

Milwaukee County subsidizes a portion of the cost of each trip made by an eligible client.

USSP Administration

Organizational Structure

Under the administrative direction of the Director of Public Works, who is appointed by the County Executive, the county's Special Service Coordinator manages the USSP (see Figure F-3). The Coordinator has direct responsibility for program administration, accounting, and marketing. The coordinator implements policies made by the Mass Transit Committee and adheres to administrative guidelines set by the Department of Public Works. Working with the program coordinator are two administrative assistants.

Arrangements with Carriers

The program contracts with chair-car and taxi companies to accept user-side subsidy charges. Participation in the USSP is open to

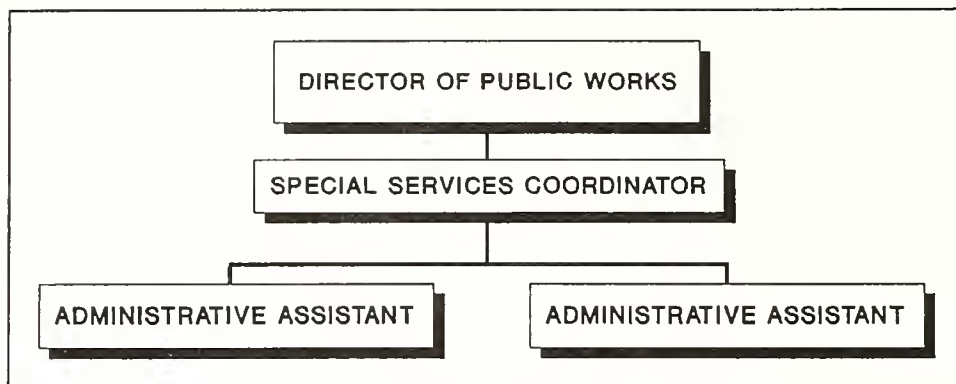


Figure F-3. USSP Organizational Chart

all carriers licensed by the Common Council of the City of Milwaukee. The program has no insurance, maintenance, or driver training requirements of its own. It relies, instead, on the requirements of the licensing board and other funding sources, particularly the Title XIX (Medicaid) program, which sets requirements for chair-car companies.

USSP reimburses companies at the rate established by the Common Council. The program requires that the carrier collect a fixed user fee. A subsidy is provided to cover the difference between the user fee and the total cost of the trip.

USSP does no dispatching or matching of participants and carriers. Participants contact the carrier of their choice directly. The carrier schedules trips independent of the USSP. The program does not require that carriers organize shared rides although carriers can reduce their costs without reducing revenue if they do schedule shared rides. The program has a special subsidy rate for carriers who transport organized groups of three or more people from one origin to one destination. Group rates are lower than if each passenger paid single fares.

Trip Verification and Voucher Processing

When a person is certified as eligible for transportation assistance, the program staff mails him or her an identification card with a unique I.D. number, general instructions, and a list of participating carriers.

Participating carriers stock user-side subsidy vouchers on their vehicles. When a passenger is making a user-side subsidy trip, the driver must request that he/she be shown the identification card for the program, and must then complete a voucher for the trip. On the voucher, the driver lists the name, address, and identification number of the participant, the total trip cost, subsidy and user charge. The driver must also have the passenger indicate the purpose of his/her trip, and sign the voucher. The customer may

also complete the back of the voucher, which asks the customer to evaluate his or her trip.

The customer returns the voucher to the driver. The transportation provider must also record the customer's origin and destination. For advance-reservation trips, the provider's office staff completes this information. For immediate-request trips that are radio-dispatched, the driver completes this portion of the voucher.

Significant Features of the USSP

Milwaukee County's USSP has stimulated competition among paratransit providers, particularly chair-car providers. Carriers are aware of program participants' ability to "shop around" and they attempt to differentiate their services from those of other providers. While new paratransit companies and longer operating hours have appeared under any type of assistance program as a result of the demand created by the program, it is unlikely that other forms of assistance would have fostered service improvements such as stopping en route or customer evaluations. Furthermore, chair-car carriers have held their fares at the maximum subsidy level, and this indicates a type of competition not present under a provider-side program, in which deficits usually are guaranteed to be made up by the subsidizing agency.

Another feature of the Milwaukee County USSP program is the program's relationship with carriers. Under the program, carriers compete with each other partly on the basis of fares. If one company raises its fare schedule, other companies may follow or may instead use the opportunity to gain a larger market share. When providers are subsidized directly, this type of competition is not present and there is little incentive for the providers to control costs and, hence, fares.



The MBTA's Call-A-Lift Bus Program

Call: 1-800-LIFT BUS

TDD 617-722-5415



MBTA Office for Transportation Access

Now You Can Call for a Bus

The MBTA will arrange to have a bus with a wheelchair lift for you on almost any one of its regularly scheduled bus routes where all scheduled buses are not wheelchair lift-equipped. Just call 1-800-LIFT BUS by 1:00 pm the day prior to your travel day and request a lift-equipped bus. That's all you need to do to take advantage of this service!

The MBTA operates two types of lift-equipped buses. One type has the lift at the front door and the other has the lift at the rear door.



Scheduling Your Call-A-Lift Bus Trip

1. If you have an MBTA System Map, use it to plan your trip. Choose the bus route on which you need to travel. Refer to a schedule card and decide what time you would like to take the bus, where you would like to get on and off the bus, and the time you would like to return.
2. If you do not have a System Map and schedule, MBTA staff will mail you one or help you plan your trip. Just call our Travel Information Line at 722-3200 (TDD 722-5146); out of area call 1-800-392-6100.
3. When you are ready to make your request, call 1-800-LIFT BUS (TDD 722-5415). Give your name and phone number, along with your trip information.
4. After your trip has been scheduled you will be called back and given the times when your bus will arrive. Feel free to call again if you do not receive a reply by 4:00 pm the day before your trip.



Boarding the Lift Bus

1. Please be at your bus stop at least five minutes before the time your bus is scheduled to arrive. Look for the international symbol of accessibility to make sure that the bus is lift-equipped.
2. When the bus arrives, please wait approximately five feet, or a reasonably safe distance, away from the door so that the lift can be deployed.



3. When the lift is fully deployed, move your wheelchair onto the platform **BACKWARDS**. When all four wheels are on the platform, **LOCK YOUR BRAKES**. **IF YOU ARE USING A MOTORIZED WHEELCHAIR, SHUT OFF THE POWER TO CONTROL.**

4. When the lift platform is level with the bus floor, back onto the bus, give the correct fare to the Operator or drop it into the fare box, and tell the Operator your destination.



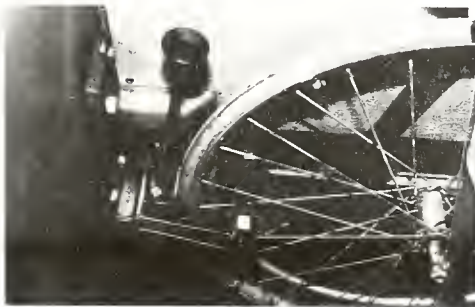
5. If you are using a motorized wheelchair and need the Operator to assist you, please disengage your clutch. Continue to one of the two tie-down locations. Be careful moving between passengers in the aisle.



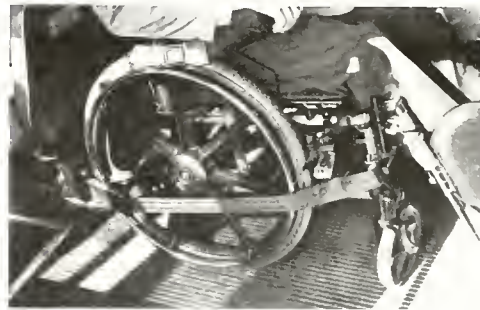
Securing Your Wheelchair

The MBTA provides two types of wheelchair tie-downs on its lift buses in order to better accommodate the wide range of wheelchairs in use today. One type utilizes a combination claw clamp and seat belt while the other uses a belt securement system.

1. To use the clamp tie-down, you must maneuver one **LARGE** rear wheel into the claw clamp. The clamp will close automatically when your wheel strikes the impact plate at the rear of the clamp. If the clamp does not close, move your wheelchair forward a few inches and back into the clamp more forcefully. When properly secured, the prongs of the claw clamp should overlap. Next, pull the seat belt completely around you and your wheelchair; if you pull the belt out straight it should come out far enough to reach around you.



2. To use the belt securement system, maneuver your wheelchair into the tie-down area. The tie-down consists of three (3) belts: one to secure the left side of your chair, one to secure the right side of your chair, and one which functions as a seat belt to be fastened around you and your wheelchair.



3. Should you need help with either style tie-down or seat belt, just ask the Operator for assistance.



Exiting the Lift Bus

1. Once the bus has stopped, release the seat belt and the claw clamp or belt tie-downs and move to the door where the lift is located. The claw clamp is released by pushing down on the knob behind the clamp, and the belt tie-downs are released by pressing the clasp button. Ask the Operator for help if necessary.
2. Wait until the lift platform is level with the bus floor. Move **FORWARD** onto the platform. If you are using a motorized wheelchair and need the Operator to assist, leave the clutch disengaged. When all four wheels are on the platform, **LOCK YOUR BRAKES. IF YOU ARE USING A MOTORIZED WHEELCHAIR, SHUT OFF POWER TO CONTROL.**
3. When the platform has reached the ground and the end safety gate has dropped, release your brakes and move off the platform. If you are using a motorized wheelchair, re-engage your clutch and turn the power 'on'.

Fares

Cash, tokens or passes can be used on these buses. Elderly and handicapped persons may apply for a Special Needs or Senior Citizen Pass, making them eligible for discount fares. Call 722-5438 for further information.



Remember

To schedule a trip, call 1-800-LIFT BUS. Lift bus requests are taken between 8:30 am and 5:00 pm. However, you must call **BEFORE 1:00 pm** to request a trip for the following day.

If you encounter difficulties, call 1-800-LIFT BUS during normal business hours or call 722-5777 during all other hours of MBTA operation.

Operators have been thoroughly trained in the use of the wheelchair lift, tie-downs, and in awareness of the needs of passengers with disabilities. However, the Operator is not able to leave the bus. If you require assistance onto the lift platform from outside the bus, a personal attendant is recommended.

The Kneeler

The MBTA has approximately 700 'kneeling' buses. The kneeler lowers the right front corner of the bus four inches closer to the sidewalk or street to make it easier for people who have trouble climbing stairs to get on and off the bus.

If you have any difficulty reaching the bus stairs, just ask the Operator to lower the kneeler for you.



Project ACTION Update

ACCESSIBLE COMMUNITY
TRANSPORTATION IN OUR NATION

Summer 1991

Service Route Networks: Bridging the Gap Between Paratransit and Fixed-Route Bus Service

A creative and cost-effective approach to meeting the public transportation needs of people with disabilities has been developed by the transit authority of Borås, Sweden.

The City Transportation Corporation (CTC) has introduced a service route network which sends small, accessible buses through targeted neighborhoods to provide service between areas where concentrations of people with disabilities and the elderly live and where they want to go. These smaller buses, which accommodate up to 20 passengers, facilitate travel for people who cannot travel long distances to get to and from bus stops.

The service route concept began as an experiment to alleviate the escalating demand on and related cost of the city's Special Transportation Service (STS), the equivalent of U.S. paratransit service. A single route was selected using city data on demographics, topography and destinations of particular interest. Officials then mapped a section of the urban area with a concentration of elderly people and people with disabilities.

Conventional fixed-route networks were usually straight radial lines connecting different areas with downtown Borås. The service route network was designed with an entirely different configuration, with priority given to bringing



Service route networks in Borås, Sweden, use small, accessible buses.

buses near residents. As a result, routes wind through different residential areas so that the distance to the bus stop is rather short for most residents.

Important components of the service route approach include:

- It is available to the general public as well as people with disabilities.

- It is part of the regular transportation system with fixed route intervals, so it does not require planned trips or advanced bookings. A service route can include predetermined bus stops or allow passengers to hail the vehicle and request drop-offs anywhere along the route. Timetables are adjusted to allow travelers enough time to board, disembark, pay the fare,

and find a seat.

- It allows fixed-route characteristics to be blended with features of a demand-response paratransit system in less densely populated areas. Unlike traditional fixed-route and demand-response paratransit systems, which may be coordinated but are

(Please turn to page 2)

Service Routes

(Continued from page 1)

distinctly separate in operations, the service route approach can take the form of a hybrid fixed-route service where advance reservations can be made or passengers can call the driver enroute for route deviation pickup. Thus, the service route vehicle and driver can provide fixed-route and demand-responsive service at the same time.

■ It requires small accessible vehicles with space for two or three wheelchairs, low entrances, kneeling features, automatic ramps, front-facing seats, level floors with no height deviation inside the bus, and grab bars. Vehicles must be built so that passengers feel close to the driver, who must be able to provide personal service if required.

■ It significantly reduces passengers' travel-related stress associated with boarding, finding a seat and disembarking safely.

The service route approach has produced some very interesting and even startling results in Borås. Nearly half of those entitled to use Special Transportation Services (STS) now choose a service route. About 15,000 fewer trips per year are made in the Borås area, freeing up STS space for those passengers who are unable to use service routes. The reduced number of STS passengers, combined with the introduction of an arrangement whereby the municipality pays the STS provider a stipulated amount for

each service route trip made by registered STS passengers, has enabled the overall cost of STS services to be cut substantially. In addition, there has been an overall increase in the use of public transportation among those elderly who do not qualify for STS. The majority of these riders are using service routes.

The service route approach has proven to be profitable, as witnessed by the steady increase in ridership. The number of passengers has risen by 60 percent, and today about 3,000 passengers use service routes. Only about 5 percent of service route passengers report difficulties in using the service, compared to 42 percent of the general riding public who report problems in using other transit modes.

The experience has been so positive for everyone involved that the future of this form of transit in Sweden seems secure. Service routes have developed rapidly. In Borås, 10 service routes were operating by late 1989, which represents a comprehensive service route network. In addition, 40 other Swedish cities have introduced service routes.

The service route approach undoubtedly will represent an important segment of future public transit in urban areas. Organizations representing the elderly and people with disabilities are so pleased with this service that they are pressuring politicians, authorities and public transportation firms to introduce

it in more municipalities.

Companies and municipal authorities also recognize the economic and improved service potential of this approach. Service routes appear to offer great possibilities in the United States. They may prove to be a missing link in encouraging people with disabilities and the elderly to use a variety of transportation options. Clearly, the approach would have to be adapted to conditions unique to a variety of local settings. For example, many people in the United States travel from one jurisdiction to another to reach their destinations, so the service route approach may need to function as a feeder to other modes of transportation. However, the approach is well worth testing in this country [See story on page 3]. For more information on the Swedish service route network, write:

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Department of Traffic Planning
and Engineering
Lund Institute of Technology
Lund University
Box 118
S-221 00 Lund, Sweden

Madison Metro experiments with service route approach

Like many other communities, Madison, Wis., has found that the demand for paratransit services is rapidly outstripping the resources available to provide them. The number of registered riders is doubling every two years, with ridership doubling every three years.

This tremendous growth led city officials to examine alternatives to paratransit service. After hearing a May 1990 presentation on service routes by Dr. Agneta Stahl of Sweden [See story on page 1], the Madison Metro Transit System and the Wisconsin Department of Transportation decided to examine how the concept could be applied in the Madison area. With a grant from the Wisconsin DOT, Madison Metro hired Dr. Stahl and Multisystems, Inc., of Cambridge, Mass., as consultants to study the applicability of service routes in Madison. This study is nearly finished.

The initial phases of the study indicate that Madison can support several service routes. A network of service routes could feed into the fixed-route system at transit centers to be built next year on the east and west sides of Madison, about three to four miles from the downtown area. These centers could also serve as points for service routes to feed into paratransit service.

Officials see several advantages in service routes. The most important advantage is the ability to provide a predictable service which does not require advanced reservations. People with disabilities could make spontaneous trips without using the cumbersome reservation system required for paratransit service. Furthermore, service routes could accommodate the increased growth and demands that city officials expect in the future.

Service routes could give Madison the ability to provide a

more efficient overall service. Service routes can be described as a hybrid between regular fixed-route transit and paratransit services. In some parts of Madison, fixed bus routes are clearly underused. By substituting service routes for fixed routes in some areas, the city could better balance its mix of transportation services. The general public would still have access to public transit services, while service to people with disabilities and the elderly would be greatly improved.

Research shows that there are significant concentrations of people with disabilities and the elderly in certain areas of the city. An analysis of traffic patterns indicates that destinations of these people are concentrated in an area relatively close to their housing locations. Thus, service routes may be very useful in Madison.

Clearly, a fixed-route bus lumbering up and down the street on the same route all day long or a paratransit vehicle darting haphazardly throughout the city simply cannot provide the necessary level of public transit service for persons with disabilities and the elderly. Service routes are a market-driven concept which provides all users with a high degree of public transit service.

To learn more about Madison Metro's project, call Transit General Manager Paul Larrousse at (608) 267-8777.

G.6 - An Overview of Travel Training Models

The following information was provided by Ms. Catie Simpson of Independent Training Consultants, Pleasanton, California.

Travel training is designed specifically to teach people with mental and physical disabilities how to use the fixed route bus system. There are a few successful approaches to this type of program. These include:

Peer Training

Peer training is an approach that has proven to be successful and preferable with the elderly. In this program, seniors in the community who already use public transit are identified and matched with those who need assistance in learning the system. This requires a central coordinator who can identify the existing riders and establish a pool of people to call upon when an individual needs assistance. This is preferable to the elderly, because they feel that a peer understands their limitations due to age and will be more patient. An elderly person may only need a couple of rides with a peer to gain knowledge of the system and confidence in their own ability.

Destination Training

A more involved type of training is destination (route specific) training. This is more applicable to developmentally disabled and some physically disabled people. In this model the individual is taught by certified professional instructors, to use the fixed route system to travel to daily destination. The instruction is provided on a one to one basis and tailored to the individual abilities of the student. Due to the mental limitations, particularly with the developmentally disabled, the instruction also includes training in appropriate ways to deal with strangers and emergency skills, street crossing and safety.

Destination training requires a more involved coordination effort. Candidates for this type of training have a lot of other people responsible for their care and they must all be involved in supporting the individual who is receiving the training. To implement this type of training instructors must assess the ability of the student and match their capability with the difficulties of the route for the specific destination. This program requires a formal model and certified instructors to be successful.

General Use Training

The last category of travel training is general use of the fixed route system. This is applicable to those who are physically

disabled with little or no mental limitations. This training requires a certified instructor who is knowledgeable about disabilities and is most effective if a model similar to the destination training model is followed.

The article reprinted below, from the August 5, 1991 edition of Passenger Transport, describes a joint effort to develop travel training programs in eastern and central Massachusetts. This kind of cooperative effort can reduce the start-up and administrative costs associated with developing a travel training program.

Massachusetts Group Creates New Mobility Training Program

ATTLEBORO, MASS. — Three Massachusetts transit authorities—the Greater Attleboro-Taunton Regional Transit Authority, the Merrimack Valley Regional Transit Authority, and the Worcester Regional Transit Authority—working with a consultant firm, have created a new cooperative program, the Mobility Training Program.

The transit authorities, working with Independent Training Consultants of Pleasanton, Calif., have pooled their financial and personnel resources to create a new program that enables the developmentally disabled, elderly, or physically disabled persons to learn to use fixed-route public transportation.

The program, which is self-paced, instructs students in areas such as route training, landmark identification, emergency skills, and stranger awareness. The individuals can be taught destination training on how to travel to and from a particular destination, or general travel training on how to read and understand bus schedules for the entire transit system.

"Mobility training is a win-win situation for everyone," said Francis Gay, GATRA administrator. "The elderly person or person with disabilities benefits from the increased independence and opportunities fixed route provides and the community benefits from the savings realized by switching people

from paratransit to fixed route service."

Gay said, "The authorities' benefits are two-fold. First, we benefit through the nature of the cooperative effort itself, the team approach. Second, the Mobility Training Program is a means of complying with the Americans with Disabilities Act."

Start-up funding for the cooperative training program is being provided by the three authorities. As the program continues, however, funding responsibility will shift to the social service agencies involved.

When asked how the social service agencies were reacting to the future funding responsibility in a time of budget cuts, Joseph Costanzo, administrator for Merrimack Valley, said: "The agencies understand that this program will not require additional funding. The money used to provide daily paratransit service for their clients will be shifted to provide Mobility Training. Of course, the authorities will still provide paratransit services for those individuals who cannot access the fixed-route system."

"This program is the first of its kind for Massachusetts and we're all very excited to be a part of this inaugural effort," declared Worcester Administrator Robert Ojala. "I believe that the authorities, people with disabilities, the community, and the social service agencies will reap the benefits of this cooperative program in a very short time."

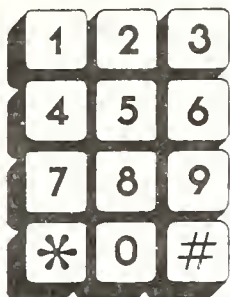
APPENDIX H

Census Information

H.1 - Census Bureau Phone Numbers

H.2 - State and National Data on Persons with "Public Transportation Disabilities" as defined in the 1980 Census

H.3 - Information about the Census Bureau's TIGER Files



U.S. Department of Commerce • Bureau of the Census • Washington, D. C. 20233

telephone contacts bureau of the census

A Data User Services Division Publication

April 1991

CENSUS BUREAU

Regional Information Services

Atlanta, GA	404/347-2274
Boston, MA	617/565-7078
Charlotte, NC	704/371-6142
Chicago, IL	312/353-0980
Dallas, TX	214/767-7105
Denver, CO	303/969-7750
Detroit, MI	313/354-4654
Kansas City, KS	816/891-7562
Los Angeles, CA	818/904-6339
New York, NY	212/264-4730
Philadelphia, PA	215/597-8313
Seattle, WA	206/728-5314

Washington, DC Staff

Note—Unless otherwise indicated, all telephone numbers listed below are in area code 301. Division abbreviations are spelled out on page 6.

Frequently Called Numbers

Census Customer Services	763-4100
(FAX: 763-4794)	
Census Personnel Locator	763-7662
Congressional Affairs	763-2446
General Information	763-4100
Population Information	763-5002/5020 (TTY)
Press	763-4040

U.S. Department of Commerce

Robert A. Mosbacher, Secretary

Rockwell A. Schnabel, Deputy Secretary—Designate

**Michael R. Darby, Under Secretary of Economic
Affairs and Administrator of the Economics and
Statistics Administration**

Key User Contacts

Age Search (Access to Personal Census Records) -	
Staff (DUSD)	763-7936
Bulletin Board - Staff (DUSD)	763-1580
Business/Industry Data Centers -	
John Rowe (DUSD)	763-1580
Census Catalog - John McCall (DUSD)	763-1584
CD-ROM - Staff (DUSD)	763-4673
CENDATA - Staff (DUSD)	763-2074
Census and You (Monthly Newsletter) -	
Jackson Morton/Neil Tillman (DUSD)	763-1584
Census Awareness (Regional Offices) -	
Staff (FLD)	763-4683
Census History - Frederick Bohme (DUSD)	763-7936
Clearinghouse for Census Data Services -	
Staff (DUSD)	763-1580
Confidentiality and Privacy Issues - Jerry Gates	
(PPDO)	763-5062
County and City, State and Metropolitan Area	
Data Books - Wanda Cevis (DUSD)	763-1034
Customer Services - Staff (DUSD)	763-4100
Education and Curriculum Support Projects -	
Staff (DUSD)	763-1510
Exhibits, Conventions - Joanne Dickinson (DUSD)	763-2370
Guides - Gary Young (DUSD)	763-1584
Historical Statistics - Staff (DUSD)	763-7936
International Visitors Program -	
Nina Pane Pinto/Gene Vandrovec (ISPC)	763-2839
Legislation - Valerie Gregg/Velma Lacy	
(PPDO)	763-7787/4001
Library - Staff (DUSD)	763-5042
Monthly Product Announcement -	
Bernice L. Baker (DUSD)	763-1584
National Services Information Centers -	
Sam Johnson (DUSD)	763-1384
Ordering Information (Computer Software/Tapes, Microfiche, Publications, etc.) - Customer	
Services (DUSD)	763-4100
Public-Use Microdata Samples -	
Carmen Campbell (DUSD)	763-2005
State Data Center Program - Larry Carbaugh	
(DUSD)	763-1580
Statistical Abstract - Glenn King (DUSD)	763-5299
Statistical Briefs - Robert Bernstein (DUSD)	763-1584
Training Courses - Staff (DUSD)	763-1510
Year 2000 Research and Development - Staff (2KS)	763-8601

**WORK DISABILITY, LABOR FORCE STATUS, AND TRANSPORTATION DISABILITY OF NONINSTITUTIONALIZED PERSONS
16-64 AND 65 AND OVER, BY STATE: APRIL 1980**

Noninstitutionalized persons 16-64										Noninstitutionalized persons 65 and over	
State	Total number	Percent reporting work disability					Percent reporting public transportation disability	Total number	Percent reporting public transportation disability		
		Total	In labor force	Not in labor force		Prevented from working					
				Able to work							
<i>East South Central</i>											
Kentucky	2,292,066	11.39	3.50	1.05	6.84	2.52	389,048	18.29			
Tennessee	2,924,804	10.37	3.35	0.97	6.06	2.34	494,346	18.67			
Alabama	2,426,576	10.59	3.33	1.03	6.22	2.63	421,935	20.20			
Mississippi	1,509,014	11.76	3.62	1.08	7.06	2.95	277,234	22.04			
<i>West South Central</i>											
Arkansas	1,380,343	12.73	4.13	1.26	7.33	2.65	296,671	18.43			
Louisiana	2,616,035	9.56	3.20	0.92	5.44	2.41	383,426	20.02			
Oklahoma	1,889,020	10.76	4.16	1.18	5.41	1.90	354,274	16.07			
Texas	9,034,363	7.84	3.19	0.76	3.89	1.71	1,312,171	16.25			
<i>Mountain</i>											
Montana	497,946	8.14	3.82	1.08	3.24	1.02	79,222	9.36			
Idaho	575,405	8.74	4.16	1.05	3.53	1.21	88,971	10.69			
Wyoming	301,618	6.14	3.24	0.74	2.16	0.71	35,058	7.95			
Colorado	1,927,480	7.23	3.47	0.89	2.87	1.23	232,186	12.86			
New Mexico	820,401	8.17	3.00	0.94	4.23	1.64	112,696	13.82			
Arizona	1,710,015	9.07	3.47	1.12	4.48	1.90	298,650	13.28			
Utah	860,162	7.54	3.74	1.07	2.73	1.09	104,961	13.22			
Nevada	545,153	7.80	3.84	0.83	3.13	1.32	63,653	11.87			
<i>Pacific</i>											
Washington	2,690,196	8.76	3.96	1.15	3.65	1.23	406,564	13.79			
Oregon	1,686,245	9.85	4.57	1.27	4.01	1.40	287,850	12.24			
California	15,610,807	8.19	3.17	0.88	4.15	1.70	2,278,038	14.89			
Alaska	274,019	5.40	2.84	0.73	1.83	0.83	10,456	9.84			
Hawaii	644,993	5.92	2.58	0.78	2.55	1.19	72,917	11.66			

SOURCE: U.S. Bureau of the Census, 1980 Census of Population; prepared from data reported in *Advance Estimates of Social, Economic, and Housing Characteristics*, parts 1-51, table P-2.

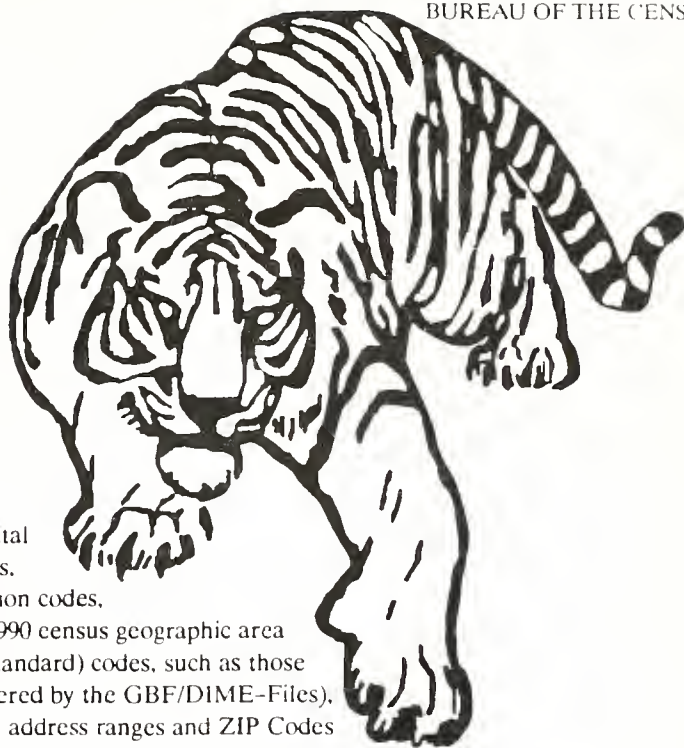
WORK DISABILITY, LABOR FORCE STATUS, AND TRANSPORTATION DISABILITY OF NONINSTITUTIONALIZED PERSONS
16-64 AND 65 AND OVER, BY STATE: APRIL 1980

Noninstitutionalized persons 16-64								Noninstitutionalized persons 65 and over	
State	Total number	Percent reporting work disability				Percent reporting public transportation disability	Total number	Percent reporting public transportation disability	
		Total	In labor force	Not in labor force					
				Able to work	Prevented from working				
United States, total	144,560,822	8.58	3.25	0.90	4.43	1.81	24,184,588	14.94	
New England									
Maine	700,315	9.75	3.74	1.04	4.96	1.66	131,697	12.87	
New Hampshire	591,095	7.51	3.41	0.78	3.31	1.19	96,639	11.59	
Vermont	325,524	8.51	3.50	0.87	4.15	1.35	54,142	13.64	
Massachusetts	3,710,159	7.29	2.94	0.75	3.61	1.70	676,384	14.54	
Rhode Island	607,367	8.63	3.40	0.79	4.45	1.93	118,457	13.87	
Connecticut	2,022,407	6.51	2.88	0.73	2.90	1.36	339,870	12.84	
Middle Atlantic									
New York	11,271,775	7.68	2.52	0.80	4.36	2.12	2,034,437	14.80	
New Jersey	4,765,766	6.88	2.56	0.70	3.60	1.76	821,766	14.92	
Pennsylvania	7,589,547	8.47	2.92	0.90	4.65	1.79	1,455,886	14.28	
East North Central									
Ohio	6,891,633	8.80	3.35	0.90	4.58	1.75	1,102,947	14.80	
Indiana	3,473,591	7.98	3.36	0.88	3.75	1.38	549,173	13.30	
Illinois	7,298,682	7.26	2.93	0.81	3.51	1.68	1,188,176	14.45	
Michigan	5,916,060	9.28	3.62	1.07	4.58	1.83	861,395	15.43	
Wisconsin	2,948,090	6.76	3.07	0.77	2.93	1.12	520,231	10.07	

**WORK DISABILITY, LABOR FORCE STATUS, AND TRANSPORTATION DISABILITY OF NONINSTITUTIONALIZED PERSONS
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				Able to work	Prevented from working				
United States, total	144,560,822	8.58	3.25	0.90	4.43	1.81	24,184,588	14.94	
West North Central									
Minnesota	2,563,841	7.04	3.58	0.86	2.60	0.99	437,367	10.10	
Iowa	1,796,809	7.24	3.42	0.85	2.96	1.05	355,123	10.73	
Missouri	3,069,087	9.13	3.54	0.97	4.62	1.75	612,449	15.10	
North Dakota	402,349	6.70	3.31	0.87	2.52	0.91	73,590	7.71	
South Dakota	417,867	7.56	3.82	0.87	2.87	1.05	83,280	8.54	
Nebraska	968,836	7.01	3.50	0.79	2.73	1.12	189,057	10.72	
Kansas	1,479,791	7.61	3.60	0.86	3.15	1.20	284,061	11.65	
South Atlantic									
Delaware	389,196	7.91	3.22	0.89	3.81	1.64	55,731	15.88	
Maryland	2,798,663	8.00	3.19	0.91	3.90	1.76	374,244	16.51	
District of Columbia	437,788	9.88	3.37	1.23	5.28	2.48	71,096	18.03	
Virginia	3,540,722	8.44	3.08	0.93	4.43	1.70	479,245	15.98	
West Virginia	1,214,538	12.34	3.26	1.15	7.92	2.51	230,679	16.93	
North Carolina	3,808,398	9.75	3.56	0.91	5.29	2.07	575,123	17.83	
South Carolina	1,999,332	9.81	3.36	0.86	5.59	2.34	275,127	19.07	
Georgia	3,481,650	10.36	3.60	0.96	5.80	2.36	489,452	19.75	
Florida	5,982,901	9.93	3.42	1.11	5.40	2.19	1,648,917	13.39	

TIGER Questions and Answers



1.Q. What is TIGER?

- A. TIGER is a Census Bureau acronym for the new digital (computer-readable) map data base that automates the mapping and related geographic activities required to support the census and survey programs of the Census Bureau.

2.Q. What is in the TIGER File?

- A. The TIGER File or TIGER data base contains digital data for all 1990 census map features (such as roads, railroads, and rivers), feature names and classification codes, alternate feature names, the associated 1980 and 1990 census geographic area codes and FIPS (Federal Information Processing Standard) codes, such as those for census tracts, blocks (for 1980 only in areas covered by the GBF/DIME-Files), cities and townships and within metropolitan areas, address ranges and ZIP Codes for streets.

3.Q. Is TIGER information available to the public?

- A. **Yes.** Extracts of the TIGER data base, known as the Precensus TIGER/Line[®] files, are now available. They contain digital data for all 1990 census map features as well as the preliminary 1990 census geographic area codes, such as census tracts and blocks, and 1988 political boundaries.

4.Q. Will other TIGER/Line file extracts be made available?

- A. An **Initial Voting District Codes** version will be released from August - October 1990. These files will update the political boundaries to January 1, 1990, include map feature information added by 1990 census enumerators and local officials, contain the initial set of codes identifying voting districts for those states in the 1990 Census Redistricting Data Program, and provide selected landmark (e.g. churches, schools) and polygon (e.g. airport or forest area boundaries) information.

The **1990 Census** version will be released from January - March, 1991. These files will show the final 1990 census tabulation geography, including, census designated places and the final voting districts. They will also include map feature corrections from the postcensus local review operation.

5.Q. What is the size of a TIGER/Line files?

- A. A TIGER/Line[®] file data of each county are contained in a series of up to six files. Additional files will be added for Initial Voting District Codes and later versions. The sizes of a Precensus TIGER/Line[®] files are as follows: Average file size for a state is 400 megabytes. The average file size for a county is 6 megabytes (individual county files range from less than 1 to over 100 megabytes). The estimated size of all files for the entire nation, including Puerto Rico, the Virgin Islands of the United States and the Outlying Areas of the Pacific is 19,700 megabytes.

¹ **TIGER** is a Census Bureau acronym for the **Topologically Integrated Geographic Encoding and Referencing System**

6.Q. Are the TIGER/Line files similar to the GBF/DIME Files?

- A. **YES** and more. The TIGER/Line[™] files replace the 1980 GBF/DIME-Files. The GBF/DIME-Files covered only the urbanized portions of the SMSAs. The TIGER/Line[™] files cover every county in the United States as well as Puerto Rico, the Virgin Islands, Guam, American Samoa, the Northern Mariana Islands, Palau, and the Pacific territories for which the U.S. Census Bureau assists in the census taking process. However, the address ranges and ZIP Codes in the TIGER/Line[™] files will be found only in the areas covered originally by the 1980 GBF/DIME-Files.

7.Q. What can I do with a TIGER/Line file?

- A. You can combine the geographic and cartographic data of a TIGER/Line[™] file with other statistical information (such as census population and housing data, census economic data, or information from other sources) using mainframe computers, microcomputers, workstations, or personal computers and appropriate software for various applications. Examples of TIGER/Line[™] file uses included thematic or other types of mapping, geocoding of spatially-referenced data for marketing research, routing or dispatching, address matching, redistricting, as well as a variety of applications using geographic information systems (GIS).

8.Q. What software will the Census Bureau provide?

- A. **NONE.** We will leave user application software to the private sector. However, we will provide references to existing commercial software through the National Clearinghouse for Census Data Services. For information on current software availability, call the numbers list below.

9.Q. How can I get a TIGER/Line file? How much does it cost?

- A. All Precensus TIGER/Line[™] files are available on computer tape: 9 track, 1600 bpi or 6250 bpi, ASCII or EBCDIC, labeled. The cost of these tapes is **\$200** for the first county ordered in each state plus **\$25** for each additional county in that state ordered at the same time. Refer to the tape chart below for the cost for each state.

The Precensus TIGER/Line[™] files also are available on CD-ROM for use on personal computers. The TIGER/Line[™] files for the Nation are contained on 37 CD-ROM discs. California and Texas require more than one CD-ROM for complete coverage, however, many states utilize far less than the total disc space and several other states are contained on a single disc. For example, the six states that comprise New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont) are on a single CD-ROM disc. The price of a Precensus TIGER/Line[™] file CD-ROM is **\$250** per disc. Refer to the chart below for contents of specific CD-ROMs.

To order TIGER/Line[™] file tapes or CD-ROMs, send a prepaid order, payable to "Commerce-Census," to **Customer Services Branch, Data User Services Division, Bureau of the Census, Washington, D.C. 20233**, or to charge your order to your VISA or Master Card or to establish a deposit account, call **(301) 763-4100**. For tape orders, please specify either 1600 or 6250 bpi, ASCII or EBCDIC. Documentation for the files can also be obtained separately for \$5.

10.Q. What other TIGER-related geographic products are available?

- A. **FORTTRAN Mapping Source Code File:** The Census Bureau makes available the FORTRAN source code routines that it used to produce TIGER maps on its Unisys 1100 Series mainframe computers, so that experienced FORTRAN systems analysts can learn how our mapping algorithms work. **However, the routines will not run on any computer system without extensive additional programming. Also we will not support the routines, nor answer questions about them.** Price: \$600.

UNISYS TIGER Documentation, 3-volume set, \$25 per set, if purchased without the FORTRAN Mapping Source Code File.

VAX TIGER Documentation, 4-volume set, \$25 per set.

Map Sheet Corner Point Coordinate File: This file contains the basic information about the scale and geographic extent of the Census Bureau's 1990 Precensus Map sheets as defined by latitude and longitude. Information is

contained on maximum/minimum values for the image area of the Census Bureau's 1990 Precensus Map sheets that the Census Bureau used for Phase 2 of the Redistricting Data Program, the Precensus Local Review Program and the Census Designated Place Program. Price: \$275.

Public Version of GRF-N (Geographic Reference File-Names) File: This file contains names and associated 1990 census codes for geographic areas, such as state, county, minor civil division/census county division, and place. Price: \$275.

PRECENSUS TIGER/LINE® FILES ON COMPUTER TAPE

State	No. of Counties	Cost	State	No. of Counties	Cost
Alabama	67	\$1,850	Montana	57	\$1,600
Alaska	25	\$ 800	Nebraska	93	\$2,500
Arizona	15	\$ 550	Nevada	17	\$ 600
Arkansas	75	\$2,050	New Hampshire	10	\$ 425
California	58	\$1,625	New Jersey	21	\$ 700
Colorado	63	\$1,750	New Mexico	33	\$1,000
Connecticut	8	\$ 375	New York	62	\$1,725
Delaware	3	\$ 250	North Carolina	100	\$2,675
District of Columbia	1	\$ 200	North Dakota	53	\$1,500
Florida	67	\$1,850	Ohio	88	\$2,375
Georgia	159	\$4,150	Oklahoma	77	\$2,100
Hawaii	5	\$ 300	Oregon	36	\$1,075
Idaho	44	\$1,275	Pennsylvania	67	\$1,850
Illinois	102	\$2,725	Rhode Island	5	\$ 300
Indiana	92	\$2,475	South Carolina	46	\$1,325
Iowa	99	\$2,650	South Dakota	66	\$1,825
Kansas	105	\$2,800	Tennessee	95	\$2,550
Kentucky	120	\$3,175	Texas	254	\$6,525
Louisiana	64	\$1,775	Utah	29	\$ 900
Maine	16	\$ 575	Vermont	14	\$ 525
Maryland	24	\$ 775	Virginia	136	\$3,575
Massachusetts	14	\$ 525	Washington	39	\$1,150
Michigan	83	\$2,250	West Virginia	55	\$1,550
Minnesota	87	\$2,350	Wisconsin	72	\$1,975
Mississippi	82	\$2,225	Wyoming	23	\$ 750
Missouri	115	\$3,050	Puerto Rico	78	\$2,125
			Outlying Areas*	67	\$1,850

*Includes American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands of the United States, Palau, plus the other areas comprising the former Trust Territory of the Pacific Islands.

PRECENSUS TIGER/LINE[™] FILES ON CD-ROM

Alabama, Alaska
Arizona
Arkansas
California (Alameda - Plumas)
California (Riverside - Yuba), Hawaii
Colorado
New England (Connecticut, Maine,
Massachusetts, New Hampshire,
Rhode Island, Vermont)
Delaware, D.C., Maryland, Virginia
Florida
Georgia
Idaho, Nebraska
Illinois
Indiana, West Virginia
Kansas
Kentucky, Utah
Louisiana
Michigan
Minnesota

Mississippi, Puerto Rico, VI,
Outlying Areas of the Pacific
Missouri
Montana
Nevada, Wyoming
New Jersey, South Carolina
New Mexico
New York
North Carolina
North Dakota, South Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Tennessee
Texas (Anderson - Hardin)
Texas (Harris - Sherman)
Texas (Smith - Zavala), Iowa
Washington
Wisconsin

The TIGER/Line[™] file CD-ROMs are the standard 4 3/4" in size. They are in the ISO 9660 format and require Microsoft CD-ROM Extensions Version 2.0 or higher. The current version is 2.1. The discs can also be used with Apple Macintosh CD-ROM readers and software setup. For your individual system see your supplier about your CD-ROM reader configuration and operation. The Precensus TIGER/Line[™] files are placed on the CD-ROM in their magnetic tape formats. The TIGER/Line[™] file data for each county are contained in a series of up to six files in flat ASCII format. Each CD-ROM also contains the TIGER/Line[™] file technical documentation and a census code and name reference file for the applicable state(s).

An electronic bulletin board containing TIGER-related information is also available on (301) 763-1568.

For more information on the TIGER data base and related products, call (301) 763-4100.



APPENDIX I

Sample Advisory Committee Memorandum of Understanding

SAMPLE

MEMORANDUM OF UNDERSTANDING

This is a Memorandum of Understanding, made this _____ day of _____, 19__ between the (name of transit authority) (herein called the Authority) and the (name of committee) (herein called the Committee).

Whereas the Authority is duly organized under (enabling legislation) to provide public transportation services in the 78 cities and towns including and surrounding Boston; and

Whereas the Committee is a body which was formed in (date) to advise and comment on Authority programs for transportation that may affect persons with disabilities and to present said advice and comment to the Authority.

Whereas 45 CFR, Part 13 calls for active consumer participation in the planning process of transit agencies that are recipients of Federal transportation monies (Section 613.204, and 609.9 through 609.25); and

Whereas both 29 United States Code 794 and (applicable state law) requires non-discrimination for persons with disabilities; and

Whereas the Committee will consist of representatives appointed by public and private human service agencies, consumer groups, and individuals interested in the accessible services of the Authority and there is a chairperson who establishes subcommittees and appoints committee members as needed; and

Whereas general meetings of the Committee shall be held monthly or as deemed necessary by the Chairperson of the Committee, and voting eligibility will be accorded by attendance at least thirty-three (33) percent of the regular scheduled meetings within a six-month period to insure an informed voting membership and the organized conduct of meetings; and

Whereas the Authority and the Committee are committed to working toward improvement and expansion of accessible transportation services for persons with disabilities and form this understanding as a vehicle to forward this work; and

Whereas a good faith effort by both parties to this Memorandum of Understanding shall result in a cooperative effort to establish a policy of providing safe, reliable, efficient and effective multi-modal accessible transportation;

Now therefore, in consideration of the mutual understandings and agreements entered herein, the Committee and the Authority agree as follows:

The Authority shall, barring extraordinary circumstances, request the Committee to review and comment within a reasonable time on all vehicle acquisitions and relevant modification plans including: Bus, Light Rail, Trackless Trolley, Commuter Rail, Heavy Rail, and Paratransit Vehicles. Excluded from this would be non-revenue maintenance and repair vehicles. Review will occur prior to finalization of specifications barring extraordinary circumstances, such as those that may occur which present the Authority with a short time frame for decision making in order to maximize the public interest.

The Authority shall make quarterly presentations for Committee review and comment, outlining construction projects under design that involve public access to transportation facilities. Updates shall be provided at subsequent quarterly meetings if any significant changes affecting accessibility are required.

The Authority shall advise the Committee of planning efforts in advance of public hearings to ensure that programs are responsive to the actual needs of persons with disabilities.

Furthermore, the Authority shall advise the Committee through its Chairperson and request the Committee to advise, review, and comment on plans to significantly alter system signage, install new elevators, initiate publicity or public information efforts on the Authority's services.

The Authority shall provide an opportunity for review and comment by the Committee on the special efforts element of the Transportation Improvement Plan.

The Authority shall provide the Committee at least (25) working days for review and comment on any of the above matters, whenever possible.

The Authority shall respond, through its (name of office overseeing access issues) or Authority designated personnel, in writing, when requested, to all correspondence initiated by the Committee and Subcommittee Chairpersons which have been voted on by the Committee or Subcommittees and processed through the Chairperson.

The Authority shall be required, to the maximum extent possible, to keep the Committee informed of the above plans and changes, through the Committee with copies to relevant subcommittee chairpersons with reasonable time for review and comment prior to final decision making.

The Committee shall respond to all requests for advice, review and comment on Station Modification, Modernization, or new Construction; acquisition of fixed route buses, trackless trolleys, and paratransit vehicles; acquisition of other rolling stock such as Heavy and Light Rail vehicles and Commuter Rail cars; fixed route bus modification or changes and trackless trolley route modification or changes; and plans to alter signage, install new elevators, and initiate publicity or public information efforts on the Authority's services in a timely manner, making a good faith effort to provide said responses within a time frame that renders them usable by the Authority.

The Committee shall make a good faith effort to assist the Authority in soliciting consumer comments on pending Federal Mass Transit Legislation and by supporting when possible, Authority applications for State and Federal grants providing they meet the requirements of Section 504 of the Rehabilitation Act, as amended, the Americans with Disabilities Act and 1990, and associated regulations.

The Committee shall make a good faith effort, whenever possible, to assist the Authority by keeping abreast of developments in transportation of persons with transportation disabilities in other parts of the State and Nation. This information shall be made available for use by the Authority.

The Committee shall make a good faith effort to assist the Authority, as much as

possible, in developing and promoting outreach efforts and publicizing the Authority's programs and services for persons with disabilities.

The Committee, in addition to the above defined responsibilities and activities, shall assist in general planning, design, implementation, development, and evaluation of the Authority's programs for persons with disabilities. The word "assist" is hereby defined as: help or aid in the development of the Authority's programs and services for persons with disabilities.

The Committee and its subcommittees shall be responsible for maintaining their own meeting minutes and meeting announcements and for requesting appropriate interpreters for meetings in a timely manner from the Authority's (name of office overseeing access issues), which will arrange for the provision of interpreters.

In any instance where the Authority and the Committee shall hold different positions, upon request from either party, each party shall put forth its rationale in writing and the correspondence shall be addressed to the Committee Chairperson with copies to the appropriate subcommittee Chairpersons and the Manager of the Authority's (name of office overseeing access issues) with copies to relevant personnel, respectively.

This Memorandum of Understanding shall remain in full force and effect unless written notice to terminate or amend same is submitted by either party. A meeting between both parties will be held within sixty (60) days of receipt of said written notice, and the parties will have sixty (60) days from the meeting date to mutually agree upon changes to the Memorandum of Understanding, otherwise same becomes null and void.

In witness whereof, the Authority and the Committee have caused this Memorandum of Understanding to be executed by their duly authorized officers as of the day and year above written.

AUTHORITY

COMMITTEE

APPENDIX J

Computer-Assisted Scheduling Information

- J.1 - General Information about PC-TRANS
- J.2 - Currently Available Software for Scheduling, Dispatching and Recordkeeping



Find an Informative, Helpful Hand with PC-TRANS

The world of microcomputers is filled with fascination and frustration. It is amazing how quickly and accurately a computer can process data that would have taken us hours or even days to process! When you've got the hi-tech world at your fingertips, everyday feels like Friday! *But*, when something goes wrong—it's Monday morning all over again!!

Whether you're just starting out with computers or are an old hand at them, computers always offer a challenge—from selecting the right software program and hardware system to mastering the program once it's up and running. So where can you find help? For over five years, transportation professionals have been turning to PC-TRANS (Personal Computers in Transportation Resource and News Service) to help them with their microcomputer questions and transportation software needs.

PC-TRANS, an FHWA-designated software distribution center, was established to meet the microcomputer application and information needs of transportation professionals including engineers, planners, administrators and transit providers. PC-TRANS provides technical support and a forum for the exchange of ideas, information and experience among microcomputer users in the transportation field. Major areas addressed by the Center include highway engineering, regional and rural transportation planning, traffic engineering and safety, and transit operations.

What Are People Saying About PC-TRANS?

"I have found [pc-trans] to be very valuable in my own 'keeping-up' effort."

"The range of topics and programs covered by your publication is quite broad, and the articles are both interesting and informative. Please keep up the good work!"

"I wanted to express my appreciation to you for the review of our software. I have already received many calls of interest as a result of this article."

"There is something informative, interesting or useful in each issue."

"I particularly enjoy the 'Tech File' section of the magazine. It presents information that many computer-knowledgeable people assume is standard knowledge—and often isn't. I've learned a lot in the past few months from that section."

"I really appreciate your in-depth coverage of the software that is available for today's transportation professional. It keeps us from using obsolete material."

A Technology Transfer Program

PC-TRANS is the microcomputer-support component to the Kansas University Transportation Center's Technology Transfer Program. In efforts to meet the microcomputing needs of transportation professionals, PC-TRANS offers a full range of information, microcomputer application and technical assistance services.



PC-TRANS
University of Kansas
(913) 864-5655

Information Services

pc-trans: A bi-monthly magazine

pc-trans is published six times a year and targets microcomputing issues of interest to the transportation professional. From the mass of information and daily breaking developments in the microcomputing field, *pc-trans* provides pertinent information on new developments in hardware and software in an easily understood manner. Simply call (913) 864-5655 to get your free subscription.

Special sections of the magazine include feature articles by users on the lessons they've learned in implementing microcomputer systems; news briefs as well as in-depth coverage of microcomputing and transportation issues; regular columns for new users, advanced users and multimedia applications; and a "Ask Our Readers" column for readers' input on current microcomputer issues.

Also included are software and publication reviews to assist users in selecting software programs. The Program Notes section provides up-to-date information on new and revised software available through PC-TRANS. Each issue also carries a calendar of events relevant to microcomputing in transportation so users can be aware of training and professional meetings in their area.

PCs in Transportation Software Directory

Knowing where to find the software you need can be a little bewildering. To help you in this task, PC-TRANS has published the *PCs in Transportation Software Directory*. The directory contains information on over 600 software products and sources of software and information and covers the areas of:

- Traffic Engineering
- Transit & Paratransit Operation
- Transportation Planning
- Civil Engineering
- Facilities Management
- Freight Transportation

For further information regarding the directory, contact PC-TRANS.

PC-TRANSport: Electronic Bulletin Board

PC-TRANSport was established to provide direct access to the software and information resources of the Center. Available on a 24-hour basis, the bulletin board provides on-line answers to commonly asked questions, brief informational notices, documents and software, and message communication with PC-TRANS staff and other users. To access the BBS call (913) 864-5058.

Microcomputer Applications Services

Software Distribution Service

PC-TRANS is constantly updating and expanding its library of software programs and documentation for transportation applications. Many of the programs are in the public domain and are made available at a minimal cost. Other products are fully supported, copyrighted software marketed through agreements with their authors. The Distribution Service is an easy way to keep current with software updates and new transportation applications.

If you have developed a program that you would like to distribute through PC-TRANS' Software Distribution Service, call us at (913) 864-5655. The Center can arrange a distribution plan to meet your needs.

Microcomputer Seminars

Microcomputer workshops for transportation professionals are offered from time to time, with notice announced through the *pc-trans* magazine.

Technical Services

PC-TRANSaction: A Telephone Hotline

A team of transportation microcomputer professionals is available for consultation in areas related to the implementation of microcomputer applications in the transportation office.

The PC-TRANSaction telephone hotline can be reached by calling (913) 864-5655, week days, 8:00 a.m. to 5:00 p.m. Central Time.

Technical Advisory Program

If your questions exceed the service range of the PC-TRANS Hotline, microcomputer and transportation experts are available on a fee-for-service basis. This assistance includes on-site technical consultation in assessing hardware and/or software needs and in developing requests for bids to procure equipment; assistance in developing special application software; or help in testing software applications that will meet a user's specific needs.

Table J.1 - Currently Available Software for Scheduling, Dispatching and Recordkeeping¹

NAME	APPLICATION	DEVELOPER	AVAILABLE FROM
Special Trips/ Reservation System	Scheduling	BISPAC Systems	Gary Coverdale 916-985-7009
CRSS	Trip Scheduling and Vehicle Routing	COMSIS Corporation	Martin J. Fertal, Senior VP 412-279-9110
CSP-25	Client Information, Handicapped and Elderly Services	Philip G. Dorcas & Associates	817-921-9704
DISPATCH-A-RIDE	Client Registration, Trip Reservation and Scheduling System	Multisystems, Inc.	Kurt D. Dossin, Director of Marketing 617-864-5810
GIRO/ACCESS	Client Information, Scheduling and Dispatching	Multisystems, Inc.	Kurt D. Dossin, Director of Marketing 617-864-5810
GMS Client Transportation and Reporting System	Driver Scheduling	Grants Management Systems	R. Webster and K. McLamb 301-933-3500
PARATRANSIT MANAGEMENT AND INFORMATION SYSTEM	Client Information	New Alternatives, Inc.	Rick Kuner, President 312-263-2808
PARIS	Trip Scheduling and Dispatching	COMSIS Corporation	Martin J. Fertal, Senior VP 412-279-9110

¹ List derived from *PCs in Transportation Software Directory*, March 1991, PC-TRANS, edited by Mehrdad Givechi, Transit and Paratransit Operations section.

PARMIS	Client Information and Scheduling	Ketron, Inc.	Deborah A. King, Programmer/Analyst 215-648-9000
PAX-1: MANAGEMENT INFORMATION FOR PARATRANSIT SERVICES	Trip Scheduling and Reporting	Amherst Computer Associates	Paul McOwen, President 413-498-4443
PSP-25: PARATRANSIT SCHEDULING PACKAGE	Handicapped and Elderly Services, and Dispatching	Philip G. Dorcas & Associates	817-921-9704
SST3	Scheduling	PC-TRANS and McTrans	913-864-5655 and 904-392-0378
TRANSIT: GENERIC SMALL TRANSIT DATA MANAGEMENT SOFTWARE	Handicapped and Elderly Transit	PC-TRANS	913-864-5655
BID PROCESSING AND DISPATCH CONTROL/ TIMEKEEPING	Dispatching and Scheduling	Multisystems, Inc.	Kurt D. Dossin, Director of Marketing 617-864-5810
TOPDOG: Transit Operator Planning, Diagnostics and Optimization Guidelines	Driver Scheduling	PC-TRANS and McTrans	913-864-5655 and 904-392-0378
CHS: CHAPEL HILL SCHEDULER	Scheduling	PC-TRANS and McTrans	913-864-5655 and 904-392-0378
HASTUS SCHEDULING SYSTEM	Scheduling	Multisystems, Inc.	John Attanucci 617-864-5810
SCOOTER		Modeling Systems, Inc.	Modeling Systems, Inc.
Teleride Sage Limited	Scheduling	Teleride Sage Ltd.	Josef Kates, Chairman 416-596-1940

APPENDIX K

Sources of Additional Information and Technical Assistance

- K.1 - USDOT/UMTA Contacts
- K.2 - UMTA Regional Offices
- K.3 - Other Implementing Agency Contacts
- K.4 - Transportation Associations and Technical Information Centers.
- K.5 - National Organization on Disability (NOD) State Contacts
- K.6 - National Disability Organizations
- K.7 - Sources of Information on Independent Living Centers
- K.8 - Disability Information and Research Centers
- K.9 - Selected Documents and Publications

K.1 - USDOT/UMTA Contacts

For further information, contact:

Ms. Susan Schruth
Office of the Chief Counsel
Urban Mass Transportation Administration
400 7th Street, S.W.
Room 9316
Washington, D.C. 20590

phone: (202) 366-4011 (voice); (202) 366-2979 (TDD)

or:

Mr. Robert C. Ashby
Deputy Assistant General Counsel
for Regulation and Enforcement
Department of Transportation
400 7th Street, S.W.
Room 10424
Washington, D.C. 20590

phone: (202) 366-9306 (voice); (202) 755-7687 (TDD)

For assistance with legal issues, contact:

Ms. Susan Schruth, or;
Ms. Elizabeth Martineau, (202)366-1936.

For assistance with paratransit issues, contact:

Mr. Robert McManus, (202) 366-4020.

For assistance with technical standards, contact:

Mr. Vincent DeMarco, (202) 366-0224.

K.2 - UMTA Regional Offices

Region 1: Includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont

Urban Mass Transportation Administration
Transportation Systems Center
Kendall Square
55 Broadway
Suite 920
Cambridge, MA 02142

Region 2: Includes New Jersey, New York and the Virgin Islands

Urban Mass Transportation Administration
26 Federal Plaza
Suite 2940
New York, NY 10278

Region 3: Includes Delaware, District of Columbia, Maryland, Pennsylvania, Virginia and West Virginia

Urban Mass Transportation Administration
841 Chestnut Street
Suite 714
Philadelphia, PA 19107

Region 4: Includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, Puerto Rico, South Carolina, and Tennessee

Urban Mass Transportation Administration
1720 Peachtree Road, N.W.
Suite 400
Atlanta, GA 30309

Region 5: Includes Illinois, Indiana, Michigan, Minnesota, Ohio and Wisconsin

Urban Mass Transportation Administration
55 East Monroe Street
Room 1415
Chicago, IL 60603

Region 6: Includes Arkansas, Louisiana, New Mexico, Oklahoma and Texas

Urban Mass Transportation Administration
819 Taylor Street
Suite 9A32
Ft. Worth, TX 76102

Region 7: Includes Iowa, Kansas, Missouri and Nebraska

Urban Mass Transportation Administration
6301 Rockhill Road
Suite 303
Kansas City, MO 64131

Region 8: Includes Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming

Urban Mass Transportation Administration
1961 Stout Street, 5th Floor
Denver, CO 80294

Region 9: Includes Arizona, California, Guam, Hawaii, Nevada and Pacific Territories

Urban Mass Transportation Administration
211 Main Street, Room 1160
San Francisco, CA 94105

Region 10: Includes Alaska, Idaho, Oregon and Washington

Urban Mass Transportation Administration
3142 Federal Building
915 Second Avenue
Seattle, WA 98174

K.3 - Other Implementing Agency Contacts

Architectural and Transportation Barriers Compliance Board

**Contact: Mr. James Raggio
Office of the Chief Counsel
(202) 653-7834 (Voice/TDD)**

Department of Justice

**Contacts: Ms. Barbara Drake
Deputy Assistant Attorney General**

**Mr. John Wodatch
Director, Office on Americans with Disabilities Act**

**ADA Information Line: (202) 514-0301 (Voice)
(202) 514-0381 (TDD)**

Equal Employment Opportunity Commission

**Contacts: Ms. Elizabeth M. Thorton
Deputy Legal Counsel
(202) 663-4638 (Voice)
(202) 663-7026 (TDD)**

**Mr. Christopher G. Bell
Acting Associate Legal Counsel for ADA Services
(202) 663-4679**

Federal Communications Commission

**Contacts: Ms. Linda Dubroof (for substantive issues)
Attorney, Common Carrier Bureau
(202) 634-1808**

**Ms. Martha Conte
Office of Public Affairs
(202) 632-7260 (Voice)
(202) 632-6999 (TDD)**

**Mr. Paul Taylor (for technical issues)
(202) 634-1855 (TDD)**

K.4 - Transportation Associations and Technical Information Center

American Public Transit Association (APTA)
1201 New York Avenue, N.W.
Washington, D.C. 20005

Contacts: Edward Gill, Deputy Counsel
(202) 898-4060
Deborah Dubin, Regulatory Analyst
(202) 898-4098

APTA is an international organization representing local mass transit systems. APTA's members include over 400 American public and private mass transit systems which carry over 95 percent of the persons using public transit in the United States. In addition, APTA represents more than 500 manufacturers, suppliers, consultants, academic institutions, and government agencies involved in the mass transit industry.

**Architectural and Transportation Barriers
Compliance Board (ATBCB)**
1111 18th Street, N.W., Suite 507
Washington, D.C. 20036-3894

Contact: Mr. Dennis Cannon, Transportation Specialist
1-800-USA-ABLE (Voice/TDD)

Community Transportation Association of America (CTAA)
725-15th Street, N.W.
Washington, D.C. 20005

Contact: David Raphael, Executive Director
1-800-527-8279

The CTAA is a national association dedicated to improving mobility for all people. CTAA focuses on improving transportation in rural areas and small cities, and wherever older Americans, persons with disabilities or poor people do not have access to conventional public transit.

The CTAA operates the RTAP National Program (Rural Transit Assistance Program) under contract to the Urban Mass Transportation Administration which provides training and technical assistance to both states and local transit systems in rural areas. CTAA also operates the

CTAP Program (Community Transportation Assistance Program) under contract to the U.S. Department of Health and Human Services which provides assistance to human service agencies transporting their clients with a special emphasis on meeting ADA requirements. Both programs include an Information Center and Hotline which can be reached by calling 1-800-527-8279.

International Taxicab and Livery Association (ITLA)
3849 Farragut Avenue
Kensington, MD 20895

Contact: Alfred LaGasse, Executive Vice President
(301) 946-5700

Project ACTION
National Easter Seal Society
1350 New York Avenue, N.W., Suite 915
Washington, D.C. 20005

Contacts: David Capozzi, Vice President
(202) 347-3066

TDD: (202) 347-7385

Project ACTION (Accessible Community Transportation In Our Nation) is managed by the National Easter Seal Society and is funded through a Cooperative Agreement with the Urban Mass Transportation Administration. Twenty-five projects were funded in 1991 that will develop improved outreach and marketing strategies, training programs for transit providers and persons with disabilities, securement systems for accessible vehicles, and techniques for identifying persons with disabilities and their transit needs.

Public Private Transportation Network (PPTN)

The PPTN is an UMTA-funded program designed to provide technical assistance to those interested in establishing, expanding, or enhancing public transportation through public-private partnerships. The program operates on a peer-to-peer approach, responding to requests for assistance from public entities at all levels, as well as private, non-profit agencies. The PPTN can be contacted by calling 1-800-522-PPTN.

K.5 - National Organization on Disability (NOD) State Contacts

Many of the individuals listed below are state-level disability office representatives. Where state-level offices do not exist, NOD identifies other individuals from key organization in that state. The National office can be contacted at:

**National Organization on Disability
910 16th Street, N.W.
Washington, D.C. 20006**

(202) 293-5960

STATE REPRESENTATIVES TO N.O.D.

April 1991

ALABAMA
Angeline Pinckard
(205) 281-8780

ILLINOIS
James de Jong
(217) 522-7016

MONTANA
Joe Mathews
(406) 444-2590

PENNSYLVANIA
Gil Selders
(717) 787-5244

ALASKA
Terry Coon
(907) 474-2440

INDIANA
Sue Ellen Jackson-Boner
(317) 232-7773

NEBRASKA
Frances Warholtz
(402) 477-9912

RHODE ISLAND
Edward Schroeder
(401) 277-3731

ARIZONA
Karen Van Epps
(602) 542-4049

IOWA
Donald Westergard
(515) 281-5969

NEVADA
Kathleen Olson
(702) 885-5348

SOUTH CAROLINA
June Licata
(803) 737-3200

ARKANSAS
Carol Cato
(501) 682-6696

KANSAS
Stephen Schiffelbein
(913) 296-3911

NEW HAMPSHIRE
Michael D. Jenkins
(603) 271-2773

SOUTH DAKOTA
Dave Knudson
(605) 339-6730

CALIFORNIA
Director of Rehabilitation
(916) 445-3971

KENTUCKY
Gerald N. Williams
(606) 231-7403

NEW JERSEY
Rick Shanberg
(609) 292-5987

TENNESSEE
Bill Manning
(615) 741-2345

COLORADO
Clair Arnold
(303) 233-1666

LOUISIANA
Patsy Barrett
(504) 342-2723

NEW MEXICO
Judy Myers
(505) 827-6465

TEXAS
Virginia Roberts
(512) 483-4380

CONNECTICUT
Stan Kosloski
(203) 297-4300

MAINE
Robert McKeagney
(207) 289-2909

NEW YORK
Francis C. Berko
(518) 474-2825

UTAH
Sherry L. Repsher
(801) 533-6770

DELAWARE
Diane Treacy
(302) 571-3915

MARYLAND
Gertrude Jeffers
(301) 333-3098

NORTH CAROLINA
Roger B. Foushee
(919) 733-9250

VERMONT
Stanley Greenberg
(802) 863-1358

FLORIDA
Thom DeLilla
(904) 488-3116

MASSACHUSETTS
Jim Gleich
(617) 727-7440

NORTH DAKOTA
Georgene Emard
(701) 775-4910

VIRGINIA
Sarah Liddle
(804) 225-2042

GEORGIA
Phil Payne
(404) 894-6737

MICHIGAN
Patrick Cannon
(517) 373-8397

OHIO
David Williams
(614) 466-9956

WASHINGTON
Paul Wysocki
(206) 753-1547

HAWAII
Francine Wai Lee
(808) 548-7606

MINNESOTA
Rachel Wobschall
(612) 297-1554

OKLAHOMA
Steven Stokes
(405) 521-3756

WEST VIRGINIA
Earl W. Wolfe
(304) 348-0627

IDAHO
Janet Wright
(208) 334-6193

MISSISSIPPI
Janet Larson
(601) 949-2012

OREGON
Bill Kachmarik
(503) 826-7515

WISCONSIN
Robert Barrow
(414) 351-1400

MISSOURI
Richard Powell
(314) 751-2600

WYOMING
Martin Mueller
(307) 777-7385

K.6 - National Disability Organizations

Americans Disabled for Attendant Programs Today (ADAPT)
12 Broadway
Denver, Colorado 80213

Contact: Robin Stephens, Co-Coordinator

American Foundation for the Blind
1515 M Street, N.W.
Suite 250
Washington, D.C. 20036

Contact: Alan Dinsmore, Legislative Network Coordinator

Association for Retarded Citizens
1522 K Street, N.W.
Suite 516
Washington, D.C. 20005

Contact: Paul Marchand, Director of Governmental Affairs

Disability Rights Education and Defense Fund, Inc.
1633 Q Street, N.W.
Suite 200
Washington, D.C. 20009

Contact: Marilyn Golden

Eastern Paralyzed Veterans Association
75-20 Astoria Boulevard
Jackson Heights, New York 11370-1178

Contact: Jim Weisman, Program Counsel

**National Alliance for the Mentally Ill
2101 Wilson Boulevard
Suite 320
Arlington, Virginia 22209**

Contact: Fred Fredelly

**National Association of the Deaf
800 Florida Avenue, N.E.
Box 2304
Washington, D.C. 20002**

Contact: Marc Charmatz

**National Easter Seal Society
1350 New York Avenue, N.W.
Suite 915
Washington, D.C. 20005**

Contact: David Capozzi, Vice President

K.7 - Sources of Information on Independent Living Centers and Programs

Independent Living Centers and Programs are an excellent source of local information and assistance on all types of disabilities. There are over 400 programs nationwide. The following organizations can help you identify programs in your area.

National Council on Independent Living
Troy Atrium
4th Street and Broadway
Troy, New York 12180

(518) 274-1979

Independent Living Research Utilization Program
2323 South Shepherd
Houston, Texas

(713) 520-0232

K.8 - Disability Information and Research Centers

Info use

1995 University Avenue, Suite 215
Berkeley, California 94704

Info use maintains a Disability Statistics Hotline which can be reached by calling: (415) 644-9901

Health Care Financing Administration
Room 2502 Oak Meadows
6325 Security Boulevard
Baltimore, Maryland 21207

(301) 966-7718

National Institute on Mental Health
Room 18-105
5600 Fishers Lane
Rockville, Maryland 20857

(301) 443-2908

Research and Training Center on Blindness
and Low-Vision Rehabilitation
Mississippi State University
P.O. Box 5365
Mississippi State, Mississippi 39762

(601) 325-2001

National Institute on Disability and
Rehabilitation Research
U.S. Department of Education
400 Maryland Avenue, S.W.
Room 3060 MES
Washington, DC 20202-2572

(202) 732-1134 (Voice)
(202) 732-5079 (TDD)

K.9 - Selected Documents and Publications

Note: Each of the publications and materials listed below was developed prior to the issuance of the USDOT regulations. While they are included as helpful sources of general information, they may not reflect the latest requirements and standards.

For Population and Demand Information:

Grey Advertising, Inc., Summary Report of Data from National Survey of Transportation Handicapped People, prepared for the Urban Mass Transportation Administration, USDOT, June, 1978.

Crain & Associates, Inc., Pat Piras Consulting Services, Nelson/Nygaard Consulting Services, "Working Paper 6: Service Needs Analysis, San Francisco Bay Area Regional Paratransit Plan, prepared for the Metropolitan Transportation Commission, January, 1990.

Urban Studies Center, A Needs Assessment and Planning Study of the Transportation - Disabled Population of Louisville and Jefferson County, College of Urban and Public Affairs, University of Louisville, August, 1988.

KETRON, Inc., Market Survey - Planning, Development and Implementation of a Paratransit Program for the Transportation Disabled Residents of New York City, Volume 2, prepared for the Office of Management and Budget, New York City, September, 1987.

Southeastern Wisconsin Regional Planning Commission, A Regional Transportation Plan for the Transportation - Handicapped in Southeastern Wisconsin: 1978-1982, April, 1978

Bureau of the Census, General Social and Economic Characteristics, reports of the U.S. Census of Population and Housing, 1980, U.S. Department of Commerce.

National Center for Health Statistics, Current Estimates from the National Health Interview Survey, 1989, October, 1990 (DHHS/PUB/PHS-90-1504)

For Demand Estimation Techniques:

Peat, Marwick, Mitchell & Co., Planning Services for Transportation - Handicapped People: Data Collection Manual, prepared for the Urban Mass Transportation Administration, USDOT, revised January, 1985. (DOT-1-83-40R)

Charles River Associates, Inc. and Multisystems, Inc., Design and Implementation of the Pittsburgh Travel Diary, prepared for the Transportation Systems Center, USDOT, 1983.

For Coordination of Services:

Center for Systems and Program Development, Inc., Best Practices in Specialized and Human Services Transportation Coordination, prepared for the U.S. Department of Health and Human Services and the U.S. Department of Transportation, July, 1989 (DOT-T-89-20)

Erskine S. Walther, Transportation Institute, North Carolina A&T State University, Coordination of Rural Public Transportation Services in Three Southeastern States, prepared for the Urban Mass Transportation Administration, USDOT, June, 1990 (DOT-T-90-17)

Urban Systems, Inc., Coordinating Special Transportation Services in Louisiana, prepared for the Urban Mass Transportation Administration, USDOT, December, 1988. (DOT-T-89-08)

Comsis Corp., HSTC - Consolidation of Human Services Transportation in Bridgeport, Connecticut, prepared for the Urban Mass Transportation Administration, USDOT, December, 1983 (DOT-TSC-UMTA-83-44)

Applied Resource Integration, Planning Guidelines for Coordinated Agency Transportation Services, 1980 (DOT-I-87-33; NTIS # PB 88-240874)

Applied Resource Integration, Implementation Guidelines for Coordinated Agency Transportation Services, 1980 (DOT-I-87-34; NTIS # PB 89-130983)

Knapp, Sue, Ecosometrics, Wisconsin Manual to Coordinate Elderly and Handicapped Transportation Services in Rural and Small Urban Counties, 1980

For Paratransit Brokerage Information:

Charles River Associates, ACCESS: Brokering Paratransit Services to the Elderly and Handicapped in Allegheny County, PA, prepared for the Urban Mass Transportation Administration, USDOT, December, 1984 (DOT-TSC-UMTA-84-35)

Charles River Associates, LISTS: Transportation Brokerage for the Elderly and Handicapped in Lancaster, PA, prepared for the Urban Mass Transportation Administration, USDOT, June, 1984 (DOT-TSC-UMTA-84-21)

Comsis Corp., Transportation Brokerage Demonstration - Bridgeport, Connecticut, prepared for the Urban Mass Transportation Administration, USDOT, 1984 (DOT-TSC-UMTA-84-35)

Schreffler, Eric N. and Spear, Bruce D., Transportation Brokerage: A Comparative Analysis of 13 Projects, Transportation Systems Center, USDOT, June, 1985

For User-Side Subsidy Information:

Cambridge Systematics, Inc., User-Side Subsidy Programs for Special Needs Transportation, A Planning Handbook, prepared for the Urban Mass Transportation Administration, USDOT, June 1983 (DOT-TSC-UMTA-83-35).

Charles River Associates, The Milwaukee County User-Side Subsidy Program: A Case Study, prepared for the Urban Mass Transportation Administration, USDOT, September, 1982 (UMTA-MA-06-0049-82-4)

Roth, J.H., Marx, L.E., and Kraus, J.E., Chicago Transit Authority, The Chicago Transit Authority's Hybrid User-Side Subsidy Program for the Disabled, presented at the 1986 Annual Meeting of the Transportation Research Board, Washington, D.C., 1986

For Paratransit Vehicle and Equipment Information:

Battelle Columbus Laboratories, National Workshop on Bus-Wheelchair Accessibility, Guideline Specifications for Active Wheelchair Lifts, prepared for the Urban Mass Transportation Administration, USDOT, May, 1986 (UMTA-IT-06-0322-87-2)

Battelle Columbus Laboratories, Guideline Specifications for Wheelchair Securement Devices (UMTA-IT-06-0322-87-4)

Battelle Columbus Laboratories, Guideline Specifications for Wheelchair Ramps (UMTA-IT-06-0322-87-3)

Pennsylvania Department of Transportation, Handbook for Purchasing a Small Transit Vehicle, prepared for the Urban Mass Transportation Administration, USDOT, October, 1988

Ohio Department of Transportation, Vehicle Catalog, December, 1990 (DOT-T-91-10)

Garber, Connie and Seitz, Joe, Vehicle Procurement, UMTA/RTAP Technical Assistance Brief Number 2.

Giuliani, Clarence, Bus Inspection Guidelines, Transportation Research Board, June, 1987

Daucher, Dale, E., Securement of Wheelchairs and Other Mobility Aids on Transit Vehicles, prepared for the Architectural and Transportation Barriers Compliance Board, printed by Project ACTION, Washington, D.C., September, 1990.

For Employee Training:

Henderson, W.H., Dabney, R.L., Thomas, D.D., Passenger Assistance Techniques: A Training Manual for Vehicle Operators of Systems Transporting the Elderly and Handicapped, Transportation Management Associates, Ft. Worth, Texas

ISS, Inc., "Understanding the Capabilities and Needs of Special Passengers", UMTA/RTAP Training Module

Community Transportation Association of America, Training Resources Catalog for Rural and Specialized Transit Systems, UMTA/RTAP National Resource Center

Uslan, Mark M., Stern, Arlene, Access to Mass Transit for Blind and Visually Impaired Travelers, American Foundation for the Blind, New York.

Murphy, Joanne, How Does a Blind Person Get Around?, American Foundation for the Blind, New York.

For Paratransit Operating Policies:

Ness, Margi, Special Policies for Special Passengers, UMTA/RTAP Technical Assistance Brief Number 3

For Ongoing Evaluation of Service:

Miller, James H., The Pennsylvania Transportation Institute, Shared-Ride Paratransit Performance Evaluation Guide, prepared for the Urban Mass Transportation Administration, USDOT, September, 1990 (DOT-T-90-10)

For Advanced Technologies Such As Smart Cards, GIS, and Computer-Aided Scheduling and Recordkeeping:

Carol L. Schweiger, Current Use of Geographic Information Systems in Transit Planning, prepared for John A. Volpe National Transportation Systems Center, August, 1991 (DOT-T-92-02)

Robert F. Casey, Lawrence N. Labell, Simon P. Prensky and Carol L. Schweiger, Advanced Public Transportation Systems: The State of the Art, prepared for UMTA, April 1991, DOT-VNTSC-UMTA-91-2

Givechi, M., PCs in Transportation Software Directory, PC-TRANS, Kansas University Transportation Center, March, 1991

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DO NOT REMOVE FROM THE LIBRARY

DATE DUE

HV1607 Thatcher, Russell H.
T33 ADA paratransit handbook
Ad11 : implementing the
complementary

DATE DUE	BORROWER'S NAME

HV1607 Thatcher, Russell H.
T33 ADA paratransit handbook
Ad11 : implementing the
complementary paratransit

AMERICAN FOUNDATION FOR THE BLIND, INC.
25 WEST 16th STREET
NEW YORK, N. Y. 10011

DEMCO

